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EASTERN AREA CRUISE NO. 19  
EASTROPAC  
7 August-26 September 1967

By

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## ITINERARY

7 August 0100 Depart Panama  
11 August 0800 Arrive Salina Cruz  
12 August 1400 Depart Salina Cruz  
13 August 2300 Arrive Acapulco  
16 August 1000 Depart Acapulco  
26-27 August Rendezvous with R/V Thomas Washington and return to regular cruise track traveling along same course.  
7 September 1100 Arrive Salina Cruz  
14 September 0800 Depart Salina Cruz  
27 September 0800 Arrive Panama

The second multiple ship oceanographic survey of the Eastern Tropical Pacific Ocean (EASTROPAC) was conducted during August and September 1967. During this period I observed pelagic birds, mammals, and fish from the flying bridge of the Research Vessel Undaunted, of the Miami Bureau of Commercial Fisheries Lab, while the ship was underway. Generally, observations ceased when the ship was stopped for oceanographic station work. In coastal areas with the ship continually underway, I watched only eight hours a day. This preliminary report summarizes my observations.

Diurnal observations were made for 359.1 hours while the ship traveled 3,323.3 miles. During this time 10,450 birds of 56 species were recorded. No nocturnal observations were made.

The cruise track (see FIGURE 1) has been divided into five areas to facilitate analysis: Area A - Panama to Acapulco along the coast; Area B - Acapulco to 5°S mainly along 105°W; Area C - 5°S 105°W to Salina Cruz mainly along 98°W; Area D - Salina Cruz to 5°27'S, 92°W mainly along 92°W; Area E - 5°27'S, 92°W to Panama. By no means do these areas represent ecological or oceanographical zones. Instead they are merely small units which make the data easier to handle at the moment. TABLES 1-8 summarize the observations for each one of these areas.

FIGURES 2-21 show the distribution and abundance of several species

and the abundance of flocks. In most cases these figures along with the tables are sufficient to explain my findings for a particular species on this trip. However, some information cannot be expressed in this manner which necessitates the following species accounts. Only those species with additional information are discussed in this section.

#### SPECIES ACCOUNTS

##### Waved Albatross (Diomedea irrorata)

This albatross was found only near the Galapagos. Murphy (Oceanic Birds of South America 1936) gives the impression that this species is seldom found north of Hood Island where they nest. However, 23 were observed in an area over 100 miles northwest of Hood Island.

##### Procellaria sp.

On 31 August I saw a large all dark procellarid at a distance. It impressed me as being larger than any member of this group that I had seen previously, but smaller than an albatross. At the time, I identified it as a member of this genus, possibly parkinsani which has been previously recorded in this general area. I am confident that it was not any of the other all dark procellarids which occur in this area - (all of which I have seen). However, since I never did get a close look at the bird the identification is highly tentative.

##### Wedge-tailed Shearwater (Puffinus pacificus)

Wedge-tails, mainly dark phase, were fairly common over a large portion of the study area (see FIGURE 5). In February and March light phase populations were found in the area. This indicates that there are two different populations utilizing the area at different times of the year. Since this species only nests on one island in the eastern Pacific, at least one of these populations must come from an area to the west of the study area -

the light phase one from Hawaii or the dark phase population from the Line Islands or French Polynesia. This conclusion is inescapable. Further work will be necessary to tell which population is from an outside area or if in fact both populations are from the west with the eastern Pacific birds intermingled with these populations.

Juan Fernandez Petrel (Pterodroma e. externa)

Juan Fernandez Petrels were common only along 105°W. Earlier in the summer Gould found them commonly along the 98°W meridian suggesting a westward movement in August. This could correspond with the increase of this species in the central Pacific during late summer. It should be remembered that at the same time they are common in the eastern Pacific (August) they are also common in the central Pacific - a range of over 2000 miles.

Collared Petrel (Pterodroma leucoptera brevipes)

Collared Petrels are easily separated from other forms of small Pterodroma by the dark underwing border and black cap which extends down the neck.

Hydrobatidae

In the past, identification of the dark storm petrels with white rumps has been difficult. This is due in part to the fact that on most trips only one species is seen, namely Leach's Storm Petrel.

On this trip most of the species of this group were observed, and after watching them in the field and checking study skins I feel that I can identify a good many individuals in the field by size and plumage characteristics. The following is my identification key to the "white-rumped" storm petrels of the central and eastern Pacific.

I. Size: Largest to smallest

Leach's - Oceanodroma leucorhoa

Harcourt's - Oceanodroma castro

Wilson's - Oceanites oceanicus

Galapagos' - Oceanodroma tethys

Graceful - Oceanites gracilis

Size is mainly when two species are seen together. However, the first three species are considerably larger than the last two and with a little practice one should be able to tell these two groups apart when only one bird is present.

## II. Tail

### A. 1. Forked

Leach's

### 2. vs. Slightly forked or not forked

Wilson's, Harcourt's, Graceful, Galapagos

### B. Amount of white in tail vs. amount of black

#### 1. Black much greater than white

Graceful Storm Petrel

#### 2. White much greater than black

Galapagos Storm Petrel

These two species are separable from the other three by this character alone.

#### 3. White and black about equal

Wilson's Storm Petrel

Harcourt's Storm Petrel

#### 4. White slightly less than black, usually with black line through white rump

Leach's Storm Petrel

As far as this character goes, the last three species are very similar. It is necessary therefore to use the forked tail of the Leach's to distinguish it from the other two species.

Wilson's and Harcourt's Storm Petrels are the hardest two species to

separate since they basically agree on all characters mentioned above.

However, they differ in length of the legs with the legs of a Wilson's generally extending beyond the tail when it flies. At other times it will dabble its long legs in the water.

Flight may also be a useful character but I did not see enough Oceanites to be sure how to tell them from Oceanodroma. However, I did see a flight difference between Leach's and Galapagos' Storm Petrels. Leach's flies like a small nighthawk with deep wing beats while tethys has a stiff wing beat due to the smaller wings of this species.

I can find no plumage or size characteristic to separate Black Storm Petrels from Markham's Storm Petrels in the field. The area of occurrence (Markham's in the colder water along the equator) and the ship following tendency of the Black Storm Petrel were used to identify these species in the field. They are both smaller than the Sooty Storm Petrel of the central Pacific and larger than dark-rumped Leach's from which they also differ in having a more deeply forked tail.

FIGURES 11-13 show the distribution of these Storm Petrels. It is likely that many of the unidentified Oceanodroma on the western two legs along the equator were Harcourt's which I overlooked at the time.

#### White-faced Storm Petrel (Pelagodroma marina)

This species was fairly common near the equator on the outer two legs but not found near the Galapagos. Competition with the resident storm petrels probably excludes it from this area.

In the region where they occurred, sea surface temperatures were less than 20°C which is possibly a limiting factor in the species. In early summer they were not found here when the temperatures were well above 20°C.

#### Blue-faced Booby (Sula dactylatra) Red-footed Booby (Sula sula)

Adults of both these species were members of eastern Pacific populations

since the light phase Red-foots had dark tails (subspecies websteri) and the Blue-faces had orange-colored bills (subspecies granti).

#### Frigatebird (Fregata)

Adult female Magnificent Frigatebirds are easily distinguished from female Greats by the color of the throat -- black in the Magnificent, and gray in the Great. It is just as easy to distinguish between the adult males of these species at close range, for the male Magnificent has a light (blue) colored bill while the male Great Frigate has a dark (black) bill. This character should work 99 percent of the time. However, a male Great that has just molted into the adult plumage may retain the light colored bill of the subadult for a while.

#### Arctic Tern (Sterna paradisea)

In September Arctic Terns were commonly encountered far from land generally moving southeast, but at other times in feeding flocks. Even those traveling groups were seen feeding. Evidently the migration of this species is leisurely.

#### Sooty Tern (Sterna fuscata)

Sooty Terns were generally uncommon over the area (see FIGURE 16) being seen in numbers larger than a hundred on only four days.

Two populations were evidently present in the area - a pre-nesting one and a post-nesting one. Near the Galapagos the flocks observed contained no young birds and the adults were in fresh plumage indicating the start of nesting cycle in this island group. On two other days when fairly large numbers of Sooties were seen immatures were present. These birds are very likely from Clipperton Island.

On 2 September I saw a flock of eight adult Sooties sitting on the water. I have never before seen them on the water when immatures were not present also.

Brown-winged Tern (Sterna anaethetus)

Seven individuals of this species were observed along the coast. I separated them from Sooty Terns on the basis of smaller size, lighter back, and shallower wing beats. They also flew more like other terns with the bill pointed down.

MAMMALS

Four hundred and twenty-two mammals of ten species were seen as follows:

	<u>No.</u>	<u>Date</u>
Sea Lion	9	September 20

Unidentified Cetaceans

	<u>No.</u>	<u>Date</u>
	4	August 7
	50	August 8
	25	August 13
	1	August 16
	20	August 23
	20	August 24
	75	September 4
	10	September 5
	1	September 24

Spotted Dolphin (Stenella graffmani)

	<u>No.</u>	<u>Date</u>
	6	August 7
	65	August 10
	35	August 12
	15	September 7

Bottled-nosed Dolphin (Tursiops)

	<u>No.</u>	<u>Date</u>
	14	September 15
	27	September 26

False Killer Whale (Pseudorca crassidens)

	<u>No.</u>	<u>Date</u>
	2	August 9
	1	September 2

Killer Whale (Orcinus orca)

	<u>No.</u>	<u>Date</u>
	4	September 19

Pilot Whale (Globicephala malaena)

	<u>No.</u>	<u>Date</u>
	20	September 4
	14	September 26

Risso's Dolphin (Grampus griseus)

No.      Date  
10      August 18

Pygmy Killer Whale? (Feresa attenuata)

No.      Date  
50      September 25

Sperm Whale (Physeter catodon)

No.      Date  
1      August 24  
12      August 25  
1      August 27  
4      September 18

Little Piked Whale (Balaenoptera acutorostrata)

No.      Date  
1      August 23

## APPENDIX

Scientific Party

Dr. R. M. Laurs - Leader - B.C.F.

Mr. R. Lynn - B.C.F.

Mr. G. Kalin - B.C.F.

Mr. D. Justice - B.C.F.

Mr. W. Mauck - S.I.O.

Mr. D. Reith - S.I.O.

Mr. C. Worrall - S.I.O.

Mr. D. Rosendahl - S.I.O.

Mr. W. Cooley - S.I.O.

Mr. T. Parr - Student S.I.O.

Mr. T. Dana - Student S.I.O.

Mr. W. Rickhus - Student S.I.O.

Mr. E. Reyna - Mexican Biologist

Mr. P. Woodward - S.I.

B.C.F. - Bureau of Commercial Fisheries

S.I.O. - Scripps Institution of Oceanography

S.I. - Smithsonian Institution

Specimens Collected

White-faced Storm Petrel - 1

Barn Swallow - 1

Empidonax sp. - 1

TABLE 1. SUMMARY OF DAILY OBSERVATIONS

	A	B	C	D	E	TOTALS
No. Miles	536.1	1022.60	759.6	574.0	404.0	3323.3
No. Hours	48.7	121.05	85.45	64.64	39.25	359.09
No. Birds	2321.	1823.	1587.	3878.	841.	10450.
No. Flocks	51.	55.	37.	58.	27.	228.
Ave. No. Birds/Flock	32.8	16.71	25.38	55.53	20.85	31.92
Ave. No. Birds/Hours	11.01	15.06	18.57	599.99	21.43	29.1

TABLE 2. ABUNDANCE OF SPECIES GROUPS BY AREA

Species Group	A	B	C	D	E	Total	% of Total Population
Albatross	0	0	0	23	1	24	.3
Shearwater-Petrel	269	1347	591	1485	93	3785	36.3
Storm Petrel	696	205	279	150	125	1455	13.9
Tropicbird	5	7	6	4	2	24	.3
Pelican	15	0	0	0	0	15	.1
Booby	475	76	136	1446	180	2313	22.1
Frigatebird	62	20	60	37	118	297	2.8
Heron	1	0	0	1	0	2	<.1
Shorebird	251	114	128	91	82	666	6.3
Jaeger	4	15	17	7	9	52	.5
Gull	18	2	1	28	1	50	.4
Tern	517	34	366	601	224	1742	16.6
Landbird	8	3	3	5	6	25	.3
Totals	2321	1823	1587	3878	841	10450	100%

TABLE 3. ABUNDANCE OF SPECIES BY AREA

Species or Species Group	Area					Totals
	A	B	C	D	E	
Waved Albatross	0	0	0	23	1	24
<u>Procellaria</u>	0	0	1	0	0	1
Pale-footed Shearwater	0	0	1	0	0	1
Pink-footed Shearwater	4	0	0	17	7	28
Wedge-tailed Shearwater	29	226	471	28	27	781
Sooty Shearwater	1	1	0	0	0	2
Slender-billed Shearwater	0	0	1	0	0	1
Black-vented Shearwater	80	0	0	1352	0	1432
Manx Shearwater	124	33	19	1	0	177
Audubon's Shearwater	0	3	0	21	6	30
Dark-rumped Petrel	0	0	2	27	32	61
Juan Fernandez Petrel	0	871	20	0	0	891
Black-winged Petrel	0	3	0	0	0	3
Kermadec Petrel	0	14	16	9	1	40
Phoenix Petrel	0	6	0	0	0	6
Collared Petrel	0	88	25	1	0	114
Cape Petrel	0	0	0	0	4	4
Shearwater	3	0	0	0	1	4
Shearwater - Petrel	28	88	33	29	15	193
<u>Pterodroma</u>	0	14	2	0	0	16
Graceful Storm Petrel	0	0	0	20	0	20
White-faced Storm Petrel	0	22	14	0	0	36
Galapagos Storm Petrel	665	28	49	25	67	834
Harcourt's Storm Petrel	0	0	0	0	5	5
Leach's Storm Petrel	0	14	52	10	1	77
Leach's Type	0	58	34	0	1	93
Black Storm Petrel	26	7	15	23	12	83
Markham's Storm Petrel	0	3	16	12	19	50
Storm Petrel	3	41	0	3	19	66
<u>Oceanodroma</u>	2	32	99	57	1	191
Red-billed Tropicbird	4	4	5	4	2	19
Red-tailed Tropicbird	0	1	1	0	0	2
Tropicbird	1	2	0	0	0	3
Brown Pelican	15	0	0	0	0	15
Blue-footed Booby	1	0	0	149	0	150
Blue-faced Booby	21	13	32	184	103	353
Red-footed Booby	32	25	83	1060	46	1246
Brown Booby	402	34	1	0	21	458
Booby	19	4	20	53	10	106
Magnificent Frigatebird	20	1	0	12	6	39
Great Frigatebird	0	1	9	0	0	10
Frigatebird	42	18	51	25	112	248
Green Heron	0	0	0	1	0	1
Cattle Egret	1	0	0	0	0	1
Whimbrel	7	0	4	0	1	12
Willet	1	0	0	0	0	1
Shorebird	19	8	0	4	1	32
Red Phalarope	3	15	72	26	63	179
Northern Phalarope	115	31	0	2	0	148
Phalarope	106	60	52	59	17	294

Table 3 cont'd.

Species or Species Group	A	B	C	D	E	Totals
Pomarine Jaeger	1	3	1	2	5	12
Parasitic Jaeger	2	0	0	1	1	4
Long-tailed Jaeger	0	0	4	1	2	7
Skua	1	0	1	1	0	3
Jaeger	0	12	11	2	1	26
Laughing Gull	1	0	0	0	0	1
Sabine's Gull	17	2	0	0	0	19
Swallow-tailed Gull	0	0	1	28	1	30
Common Noddy	231	0	1	0	46	278
Black Tern	218	13	1	0	34	266
Common Tern	4	0	0	0	0	4
Arctic Tern	0	0	14	13	43	70
Sooty Tern	36	13	322	583	92	1046
Brown-winged Tern	3	4	0	0	0	7
Tern	25	4	28	5	9	71
Nighthawk	0	0	0	0	1	1
<u>Empidonax</u>	0	1	0	0	0	1
Barn Swallow	0	0	0	1	1	2
Cliff Swallow	0	0	0	1	0	1
Swallow	1	0	2	0	1	4
Prothonotary Warbler	0	0	0	1	0	1
Unidentified Passerines	0	0	0	1	2	3
Bird	7	2	1	1	1	12
Totals	2321	1823	1587	3878	841	10450

TABLE 4. SUMMARY OF AREA A

Species	August						September		Totals	
	7	8	9	10	12	13	7	14		
Pink-footed Shearwater	0	4	0	0	0	0	0	0	4	
Wedge-tailed Shearwater	0	5	2	0	0	0	0	20	27	
Sooty Shearwater	0	0	0	1	0	0	0	0	1	
Black-vented Shearwater	0	0	0	0	80	0	0	0	80	
Manx Shearwater	1	8	0	4	0	51	0	60	124	
Shearwater	0	1	2	0	0	0	0	0	3	
Shearwater-Petrel	0	0	2	1	0	0	0	0	28	
Galapagos Storm Petrel	63	560	39	0	0	4	2	0	662	
Black Storm Petrel	12	6	1	1	0	0	0	0	26	
Storm Petrel	2	1	0	0	0	0	0	0	3	
Oceanodroma	0	0	0	0	0	0	0	2	4	
Red-billed Tropicbird	0	1	3	0	0	0	0	0	1	
Tropicbird	0	1	0	0	0	0	0	1	15	
Brown Pelican	1	0	0	13	0	0	0	1	1	
Blue-footed Booby	0	0	0	0	0	8	0	2	23	
Blue-faced Booby	0	0	3	10	2	28	0	0	32	
Red-footed Booby	0	0	1	2	57	63	31	0	402	
Brown Booby	11	231	7	2	0	15	0	1	19	
Booby	0	0	0	3	0	0	0	1	20	
Magnificent Frigatebird	2	1	0	15	1	0	0	4	42	
Frigatebird	4	3	0	26	3	0	2	0	1	
Cattle Egret	1	0	0	0	0	0	0	0	7	
Whimbrel	0	2	5	0	0	0	0	0	1	
Willet	0	0	0	1	0	0	0	0	19	
Shorebird	1	0	0	8	0	10	0	1	3	
Red Phalarope	0	0	1	0	0	0	1	74	115	
Northern Phalarope	5	6	0	11	2	17	0	22	106	
Phalarope	0	3	0	46	8	22	5	0	1	
Pomarine Jaeger	1	0	0	0	0	0	0	0	2	
Parasitic Jaeger	0	0	0	0	0	2	0	0	1	
Skua	0	0	0	0	0	1	0	0	1	
Laughing Gull	0	0	0	0	0	0	1	0	17	
Sabine's Gull	1	4	0	8	1	3	0	0	231	
Common Noddy	107	124	0	0	0	46	15	4	218	
Black Tern	13	6	0	0	134	0	3	0	4	
Common Tern	0	0	0	1	0	0	0	36	36	
Sooty Tern	0	0	0	0	0	0	0	0	3	
Brown-winged Tern	1	0	0	2	0	0	0	3	28	
Tern	10	5	0	5	2	3	0	0	1	
Swallow	1	0	0	0	0	0	0	0	7	
Bird	1	2	1	3	0	0	0	0		
Totals		238	974	67	163	289	276	57	257	2321

Table 4 Summary of Area A cont'd.

	No. of Birds	No. of Sightings	No. of Species	No. of Birds In Flocks	No. of Birds Not In Flocks	No. of Flocks	No. of Hours	No. of Miles
<u>August</u>								
7	238	87	14	103	135	9	8.0	93.0
8	974	90	14	837	137	8	8.0	88.0
9	67	33	9	15	52	2	8.0	80.0
10	163	69	13	59	104	8	8.0	96.0
12	289	28	7	252	37	6	3.5	37.1
13	276	72	11	174	102	13	5.0	60.0
<u>September</u>								
7	57	29	6	7	50	1	3.2	32.0
14	257	37	11	199	58	4	5.0	50.0
Totals	2321	445	29	1646	695	51	48.7	536.1

## FLOCK COMPOSITION

Species	No.	% of Species Population In Flocks	% of Total Birds In Flock	No. of Flocks Species Present In
Pink-footed Shearwater	2	50.0	.1	1
Wedge-tailed Shearwater	18	66.6	1.1	3
Manx (Black-vented) Shearwater	159	77.9	9.7	10
Shearwater/Petrel	25	39.2	1.5	1
Galapagos Storm Petrel	553	83.5	33.8	7
Brown Pelican	8	53.3	.4	1
Blue-faced Booby	5	21.7	.3	2
Red-footed Booby	18	56.2	1.1	4
Brown Booby	299	74.3	18.2	11
Booby	15	78.9	.9	2
Whimbrel	5	71.4	.3	1
Shorebird	17	89.4	1.0	2
Northern Phalarope	93	80.8	5.6	4
Phalarope	47	44.3	2.8	7
Sabine's Gull	9	52.9	.5	2
Common Noddy	177	76.6	10.8	11
Black Tern	161	73.8	9.8	6
Sooty Tern	32	88.8	1.9	2
Tern	3	10.7	.1	1
Totals	1646	-	100.0 %	

TABLE 5. SUMMARY OF AREA B

Species	16	17	18	19	20	21	22	23	24	25	26	27	28	Totals
Wedge-tailed Shearwater	0	6	86	62	49	22	0	1	0	0	0	0	0	226
Sooty Shearwater	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Manx Shearwater	10	17	2	4	0	0	0	0	0	0	0	0	0	33
Audubon's Shearwater	0	0	0	0	1	1	0	0	1	0	0	0	0	3
Juan Fernandez Petrel	0	25	259	180	72	334	0	0	0	0	1	0	0	871
Black-winged Petrel	0	0	0	0	0	3	0	0	0	0	0	0	0	3
Kermadec Petrel	0	5	0	0	3	4	1	1	0	0	0	0	0	14
Phoenix Petrel	0	0	2	1	1	2	0	0	0	0	0	0	0	6
Collared Petrel	0	0	0	0	0	2	16	3	1	10	17	29	10	88
Shearwater Petrel	1	9	4	8	13	36	11	0	0	0	1	2	3	88
<u>Pterodroma</u>	0	0	0	0	0	0	3	0	1	1	7	1	1	14
White-faced Storm Petrel	0	0	0	0	0	0	0	1	2	3	1	1	14	22
Galapagos Storm Petrel	0	0	1	16	4	1	0	0	0	4	1	1	0	28
Leach's Storm Petrel	0	2	1	2	1	0	0	0	2	6	0	0	0	14
Leach's Type	0	21	0	0	1	0	6	0	14	6	0	1	9	58
Black Storm Petrel	1	0	0	5	1	0	0	0	0	0	0	0	0	7
Markham's Storm Petrel	0	0	0	0	0	0	1	0	1	1	0	0	0	3
Storm Petrel	1	0	18	3	9	0	2	1	7	0	6	0	0	47
<u>Oceanodroma</u>	2	0	0	0	0	0	0	0	0	20	0	1	3	26
Red-billed Tropicbird	0	2	2	0	0	0	0	0	0	0	0	0	0	4
Red-tailed Tropicbird	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Tropicbird	0	1	1	0	0	0	0	0	0	0	0	0	0	2
Blue-faced Booby	0	10	2	0	1	0	0	0	0	0	0	0	0	13
Red-footed Booby	3	21	1	0	0	0	0	0	0	0	0	0	0	25
Brown Booby	28	4	0	1	0	1	0	0	0	0	0	0	0	34
Booby	3	1	0	0	0	0	0	0	0	0	0	0	0	4
Magnificent Frigatebird	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Great Frigatebird	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Frigatebird	0	0	0	0	0	13	4	1	0	0	0	0	0	18
Shorebird	7	0	0	0	0	0	0	1	0	0	0	0	0	8
Red Phalarope	0	1	4	7	0	0	3	0	0	0	0	0	0	15
Northern Phalarope	17	14	0	0	0	0	0	0	0	0	0	0	0	31
Phalarope	29	12	9	2	4	1	0	2	0	1	0	0	0	60
Pomarine Jaeger	0	3	0	0	0	0	0	0	0	0	0	0	0	3
Jaeger	2	9	1	0	0	0	0	0	0	0	0	0	0	12
Sabine's Gull	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Black Tern	13	0	0	0	0	0	0	0	0	0	0	0	0	13
Sooty Tern	0	0	0	0	0	4	5	0	0	0	4	0	0	13
Brown-winged Tern	4	0	0	0	0	0	0	0	0	0	0	0	0	4
Tern	3	0	0	0	1	0	0	0	0	0	0	0	0	4
<u>Empidonax</u>	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Bird	0	1	0	0	1	0	0	0	0	0	0	0	0	2
Totals	126	165	393	292	162	425	53	12	29	52	38	36	40	1823

Table 5 Summary of Area B cont'd.

	No. of Birds	No. of Sightings	No. of Species	No. of Birds In Flocks	No. of Birds Not In Flocks	No. of Flocks	No. of Hours	No. of Miles
<u>August</u>								
16	126	55	11	45	81	6	6.10	43.6
17	165	80	13	45	120	4	9.30	71.0
18	393	101	11	261	132	20	9.75	96.0
19	292	98	10	135	157	9	10.25	91.0
20	162	60	11	81	81	8	10.25	89.0
21	425	60	12	332	93	7	9.80	82.0
22	53	31	7	14	39	1	9.50	68.0
23	12	12	7	0	12	0	9.70	59.0
24	29	20	5	6	23	1	9.80	72.0
25	52	47	6	0	52	0	9.50	79.0
26	38	34	5	0	38	0	9.10	117.0
27	36	33	4	0	36	0	8.50	85.0
28	40	36	3	0	40	0	9.50	70.0
Totals	1823	667	29	919	904	55	121.05	1022.6

## FLOCK COMPOSITION

Species	No.	% of Species Population In Flocks	% of Total Birds In Flocks	No. of Flocks Species Present In.
Wedge-tailed Shearwater	139	61.5	15.1	17
Manx Shearwater	4	12.1	.4	2
Juan Fernandez Petrel	621	71.2	67.5	37
Shearwater Petrel	55	62.5	5.9	4
Galapagos Storm Petrel	2	7.1	.2	1
Leach's Type	11	18.9	1.1	2
Blue-faced Booby	5	38.4	.5	1
Red-footed Booby	1	4.0	.1	1
Brown Booby	8	23.5	.8	1
Magnificent Frigatebird	1	100.0	.1	1
Frigatebird	11	61.1	1.1	4
Shorebird	7	87.5	.7	1
Northern Phalarope	22	70.9	2.3	2
Phalarope	14	23.3	1.5	2
Pomarine Jaeger	2	67.0	.2	1
Black Tern	8	61.5	.8	1
Sooty Tern	8	61.5	.8	2
Totals	919	-	100%	-

TABLE 6. SUMMARY OF AREA C

Species			August			September			6	Totals
	29	30	31	1	2	3	4	5		
<u>Procellaria</u>	0	0	1	0	0	0	0	0	0	1
Pale-footed Shearwater	0	1	0	0	0	0	0	0	0	1
Wedge-tailed Shearwater	0	0	0	0	3	335	111	22	0	471
Slender-billed Shearwater	0	1	0	0	0	0	0	0	0	1
Manx Shearwater	0	0	0	0	0	1	2	2	14	19
Dark-rumped Petrel	0	0	0	2	0	0	0	0	0	2
Juan Fernandez Petrel	0	0	0	0	4	14	2	0	0	20
Kermadec Petrel	1	0	0	1	2	4	6	2	0	16
Collared Petrel	10	2	0	2	4	7	0	0	0	25
Shearwater-Petrel	2	1	0	4	4	15	4	1	2	33
<u>Pterodroma</u>	1	1	0	0	0	0	0	0	0	2
White-faced Storm Petrel	3	10	0	1	0	0	0	0	0	14
Galapagos Storm Petrel	0	4	7	15	14	3	5	1	0	49
Leach's Storm Petrel	1	20	14	0	3	13	1	0	0	52
Leach's Type	4	15	12	1	1	0	1	0	0	34
Black Storm Petrel	0	0	0	0	4	5	6	0	0	15
Markham's Storm Petrel	1	11	2	2	0	0	0	0	0	16
<u>Oceanodroma</u>	1	5	31	7	5	32	10	6	2	99
Red-billed Tropicbird	0	0	0	0	0	0	1	3	1	5
Red-tailed Tropicbird	0	0	0	0	0	1	0	0	0	1
Blue-faced Booby	0	0	0	2	2	2	6	12	8	32
Red-footed Booby	0	0	0	1	5	3	6	48	20	83
Brown Booby	0	0	0	0	0	0	0	0	1	1
Booby	0	0	0	0	0	0	0	0	20	20
Great Frigatebird	0	0	0	0	4	5	0	0	0	9
Frigatebird	0	0	0	19	18	5	4	0	5	51
Whimbrel	0	0	0	0	0	0	0	0	4	4
Red Phalarope	0	0	21	0	1	3	6	13	28	72
Phalarope	0	1	15	0	0	9	8	10	9	52
Pomarine Jaeger	0	0	0	0	0	0	0	1	0	1
Long-tailed Jaeger	0	0	0	2	0	0	1	1	0	4
Skua	0	0	0	0	0	0	0	1	0	1
Jaeger	0	0	0	0	0	4	6	0	1	11
Swallow-tailed Gull	0	0	1	0	0	0	0	0	0	1
Common Noddy	0	0	0	0	0	1	0	0	1	1
Black Tern	0	0	0	0	0	0	0	0	1	1
Arctic Tern	0	1	0	0	0	9	0	4	0	14
Sooty Tern	0	0	0	179	1	127	5	10	0	322
Tern	0	0	0	1	0	0	0	2	25	28
Swallow	0	0	0	0	0	0	1	1	0	2
Bird	1	0	0	0	0	0	0	0	0	1
<b>Totals</b>	<b>25</b>	<b>73</b>	<b>104</b>	<b>239</b>	<b>75</b>	<b>598</b>	<b>192</b>	<b>140</b>	<b>141</b>	<b>1587</b>

Table 6 Summary of Area C cont'd.

	No. of Birds	No. of Sightings	No. of Species	No. of Birds In Flocks	No. of Birds Not In Flocks	No. of Flocks	No. of Hours	No. of Miles
<u>August</u>								
29	25	20	5	5	20	1	9.20	82.8
30	73	50	9	11	62	2	8.00	92.8
31	104	62	6	0	104	0	9.40	62.0
<u>September</u>								
1	239	43	12	187	52	6	9.60	72.0
2	75	44	12	15	60	3	9.90	74.0
3	598	94	18	478	120	12	9.75	93.0
4	192	76	16	81	111	5	10.00	89.0
5	140	44	14	79	61	4	9.80	103.0
6	141	42	12	83	58	4	9.80	91.0
Totals	1587	545	31	939	648	37	85.45	759.6

## FLOCK COMPOSITION

Species	No.	% of Species Population In Flocks	% of Total Birds In Flock	No. of Flocks Species Present In.
Wedge-tailed Shearwater	388	82.3	41.3	11
Manx Shearwater	10	52.6	1.0	1
Juan Fernandez Petrel	5	25.0	.5	3
Collared Petrel	5	20.0	.5	1
Shearwater-Petrel	2	6.0	.2	1
Galapagos Storm Petrel	5	10.2	.5	2
Leach's Storm Petrel	8	15.3	.8	3
Leach's Type	5	14.7	.5	1
Black Storm Petrel	2	13.3	.2	1
Oceanodroma	26	26.2	2.7	2
Blue-faced Booby	10	31.3	1.0	3
Red-footed Booby	62	74.6	6.6	5
Booby	20	100.0	2.1	1
Great Frigatebird	8	88.8	.8	2
Frigatebird	21	41.1	2.2	8
Red Phalarope	12	16.6	1.2	2
Jaeger	3	27.2	.3	2
Arctic Tern	8	57.1	.8	5
Sooty Tern	314	97.5	33.4	15
Tern	25	89.2	2.6	1
Totals	939	-	100%	-

TABLE 7. SUMMARY OF AREA D

Species	September							Totals
	15	16	17	18	19	20	21	
Waved Albatross	0	0	0	0	0	23	0	23
Pink-footed Shearwater	0	0	11	4	2	0	0	17
Wedge-tailed Shearwater	20	2	0	6	0	0	0	28
Black-vented Shearwater	1352	0	0	0	0	0	0	1352
Manx Shearwater	0	1	0	0	0	0	0	1
Audubon's Shearwater	0	0	0	0	13	8	0	21
Dark-rumped Petrel	0	0	0	0	1	17	9	27
Kermadec Petrel	1	4	1	0	1	0	2	9
Collared Petrel	0	0	0	0	1	0	0	1
Shearwater-Petrel	2	2	11	2	8	2	2	29
Graceful Storm Petrel	0	0	0	0	0	19	1	20
Galapagos Storm Petrel	0	9	4	0	2	8	2	25
Leach's Storm Petrel	6	1	0	2	1	0	0	10
Black Storm Petrel	14	3	5	1	0	0	0	23
Markham's Storm Petrel	0	0	0	0	4	0	8	12
Storm Petrel	0	0	0	0	0	0	3	3
<u>Oceanodroma</u>	16	25	5	3	5	3	0	57
Red-billed Tropicbird	0	0	1	0	1	2	0	4
Blue-footed Booby	0	0	0	0	0	149	0	149
Blue-faced	8	8	7	1	151	2	7	184
Red-footed Booby	3	1	1	24	1031	0	0	1060
Booby	0	3	0	0	50	0	0	53
Magnificent Frigatebird	0	0	0	0	7	5	0	12
Frigatebird	0	0	0	5	14	3	3	25
Green Heron	0	1	0	0	0	0	0	1
Shorebird	0	4	0	0	0	0	0	4
Red Phalarope	7	3	7	4	0	0	5	26
Northern Phalarope	0	0	1	0	0	1	0	2
Phalarope	24	1	7	11	0	16	0	59
Pomarine Jaeger	2	0	0	0	0	0	0	2
Parasitic Jaeger	1	0	0	0	0	0	0	1
Long-tailed Jaeger	0	0	0	0	1	0	0	1
Skua	0	0	0	0	0	1	0	1
Jaeger	0	1	0	0	0	1	0	2
Swallow-tailed Gull	0	0	0	0	0	28	0	28
Arctic Tern	0	0	3	3	6	0	1	13
Sooty Tern	0	0	0	295	288	0	0	583
Tern	2	1	0	2	0	0	0	5
Barn Swallow	0	1	0	0	0	0	0	1
Cliff Swallow	1	0	0	0	0	0	0	1
Prothonotary Warbler	1	0	0	0	0	0	0	1
Unidentified Passerines	0	1	0	0	0	0	0	1
Bird	0	0	0	0	0	1	0	1
Totals	1460	72	64	363	1587	289	43	3878

Table 7 - Summary of Area D cont'd.

	No. of Birds	No. of Sightings	No. of Species	No. of Birds In Flocks	No. of Birds Not In Flocks	No. of Flocks	No. of Hours	No. of Miles
<u>September</u>								
15	1460	62	12	1391	69	25	8.90	74
16	72	46	14	0	72	0	9.40	89
17	64	53	10	0	64	0	9.10	91
18	363	33	10	324	39	4	8.10	80
19	1587	89	15	1370	217	16	8.75	80
20	289	113	13	136	153	13	11.30	73
21	43	39	9	0	43	0	9.10	87
Totals	3878	435	31	3221	657	58	64.64	574

## FLOCK COMPOSITION

Species	No.	% of Species Population In Flocks	% of Total Birds In Flocks	No. of Flocks Species Present In
Wedge-tailed Shearwater	11	39.2	.3	3
Black-vented Shearwater	1349	99.7	41.8	21
Audubon's Shearwater	6	28.5	.1	1
Graceful Storm Petrel	16	80.0	.4	2
Black Storm Petrel	12	52.1	.3	1
<u>Oceanodroma</u>	12	21.0	.3	1
Blue-footed Booby	103	69.1	3.1	9
Blue-faced Booby	142	77.1	4.4	8
Red-footed Booby	932	87.9	28.9	14
Booby	50	94.3	1.5	1
Magnificent Frigatebird	5	41.6	.1	1
Frigatebird	14	56.0	.4	6
Phalarope	16	27.1	.4	2
Swallow-tailed Gull	8	28.5	.2	1
Arctic Tern	8	61.5	.2	4
Sooty Tern	537	92.1	16.6	13
Totals	3221	-	100%	-

TABLE 8. SUMMARY OF AREA E

Species	September					Totals
	22	23	24	25	26	
Waved Albatross	0	0	1	0	0	1
Pink-footed Shearwater	0	0	7	0	0	7
Wedge-tailed Shearwater	0	0	0	27	0	27
Audubon's Shearwater	0	0	1	0	5	6
Dark-rumped Petrel	9	13	10	0	0	32
Kermadec Petrel	1	0	0	0	0	1
Cape Petrel	0	3	1	0	0	4
Shearwater	0	0	0	1	0	1
Shearwater-Petrel	2	1	3	4	5	15
Galapagos Storm Petrel	6	6	6	7	42	67
Harcourt's Storm Petrel	0	0	3	0	2	5
Leach's Storm Petrel	1	0	0	0	0	1
Leach's Type	1	0	0	0	0	1
Black Storm Petrel	0	0	0	7	5	12
Markham's Storm Petrel	2	12	5	0	0	19
Storm Petrel	3	5	8	3	0	19
<u>Oceanodroma</u>	0	1	0	0	0	1
Red-billed Tropicbird	0	0	0	2	0	2
Blue-faced Booby	4	4	16	79	0	103
Red-footed Booby	0	0	41	5	0	46
Brown Booby	0	0	0	0	21	21
Booby	0	0	10	0	0	10
Magnificent Frigatebird	0	0	3	3	0	6
Frigatebird	1	1	108	2	0	112
Whimbrel	0	1	0	0	0	1
Shorebird	0	0	0	1	0	1
Red Phalarope	22	35	6	0	0	63
Phalarope	2	5	1	9	0	17
Pomarine Jaeger	0	0	0	5	0	5
Parasitic Jaeger	0	0	1	0	0	1
Long-tailed Jaeger	0	0	1	1	0	2
Jaeger	0	0	1	0	0	1
Swallow-tailed Gull	0	0	1	0	0	1
Common Noddy	0	0	0	0	46	46
Black Tern	0	0	0	0	34	34
Arctic Tern	17	0	20	6	0	43
Sooty Tern	0	0	0	86	6	92
Tern	0	0	5	4	0	9
Nighthawk	0	0	0	0	1	1
Barn Swallow	0	0	0	0	1	1
Swallow	0	1	0	0	0	1
Unidentified Passerines	0	0	0	0	2	2
Bird	0	0	0	1	0	1
<b>Totals</b>	<b>71</b>	<b>88</b>	<b>259</b>	<b>253</b>	<b>170</b>	<b>841</b>

Table 8 -Summary of Area E cont'd.

	No. of Birds	No. of Sightings	No. of Species	No. of Birds In Flocks	No. of Birds Not In Flocks	No. of Flocks	No. of Hours	No. of Miles
<u>September</u>								
22	71	32	9	33	38	3	8.00	80
23	88	54	9	12	76	1	8.00	84
24	259	64	16	183	76	9	8.00	84
25	253	39	14	201	52	7	7.25	76
26	170	25	11	134	36	7	8.00	80
Totals	841	214	29	563	278	27	39.25	404

Species	No.	FLOCK COMPOSITION			No. of Flocks Species Present In
		% of Species Population In Flock	% of Total Birds In Flock		
Wedge-tailed Shearwater	27	100.0	4.7		5
Audubon's Shearwater	5	83.3	.8		1
Shearwater-Petrel	6	40.0	1.0		2
Shearwater	1	100.0	.1		1
Galapagos Storm Petrel	30	44.7	5.3		4
Harcourt's Storm Petrel	1	20.0	.1		1
Storm Petrel	4	21.0	.7		1
Blue-faced Booby	80	77.6	14.2		7
Red-footed Booby	32	69.5	5.6		5
Brown Booby	16	76.1	2.8		2
Booby	10	100.0	1.7		2
Magnificent Frigatebird	3	50.0	.5		1
Frigatebird	107	95.5	19.0		6
Red Phalarope	38	60.3	6.7		3
Pomarine Jaeger	4	80.0	.7		2
Long-tailed Jaeger	1	50.0	.1		1
Common Noddy	46	100.0	8.1		3
Black Tern	28	82.3	4.9		2
Arctic Tern	27	62.7	4.7		5
Sooty Tern	92	100.0	16.3		6
Tern	5	55.5	.8		1
Totals	563	-	100.0 %		-

Figure 1. Daily Noon Positions

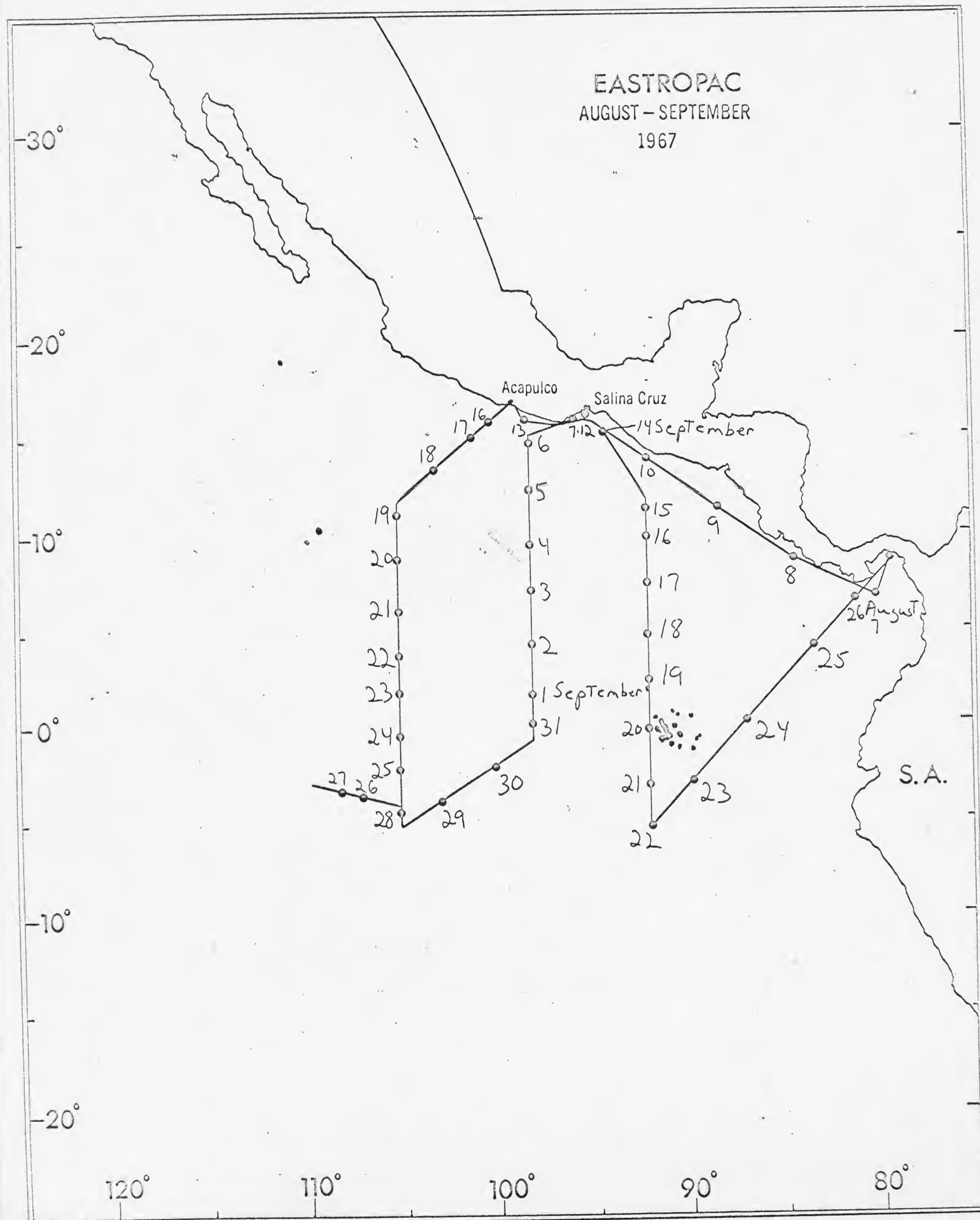


Figure 2. Daily Abundance of Birds

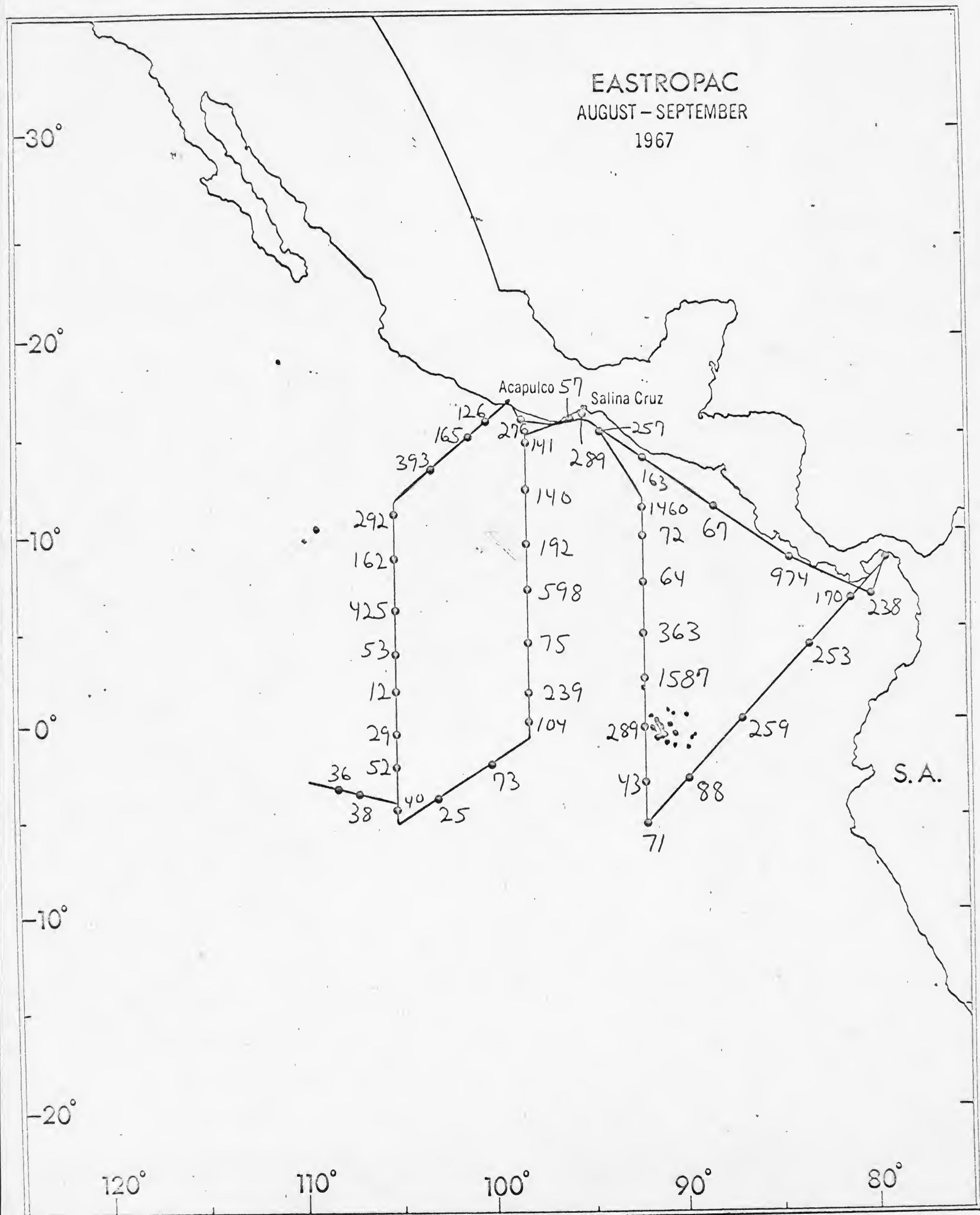


Figure 3. Daily Abundance of Turtles

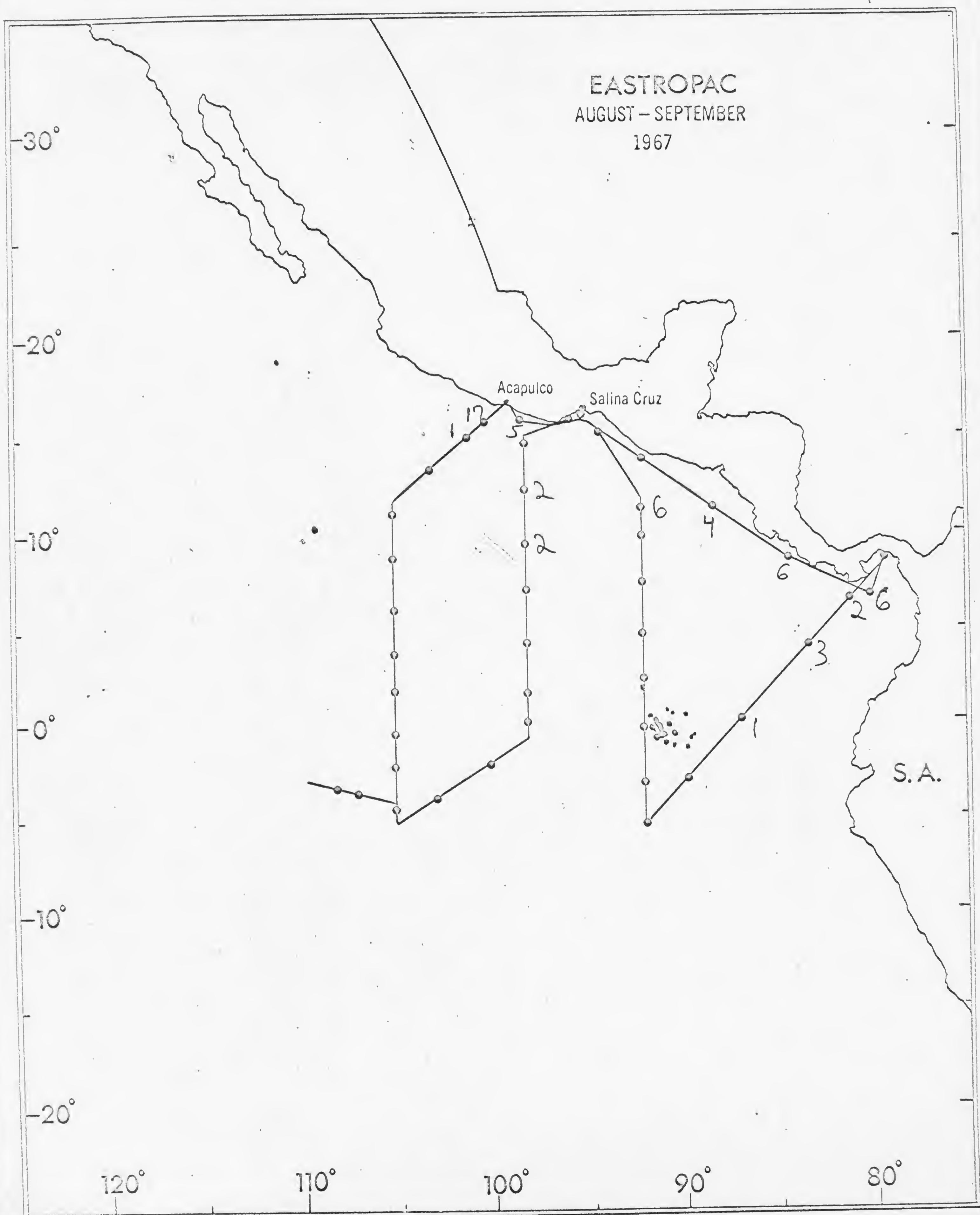


Figure 4. Daily Abundance of Pink-footed Shearwaters

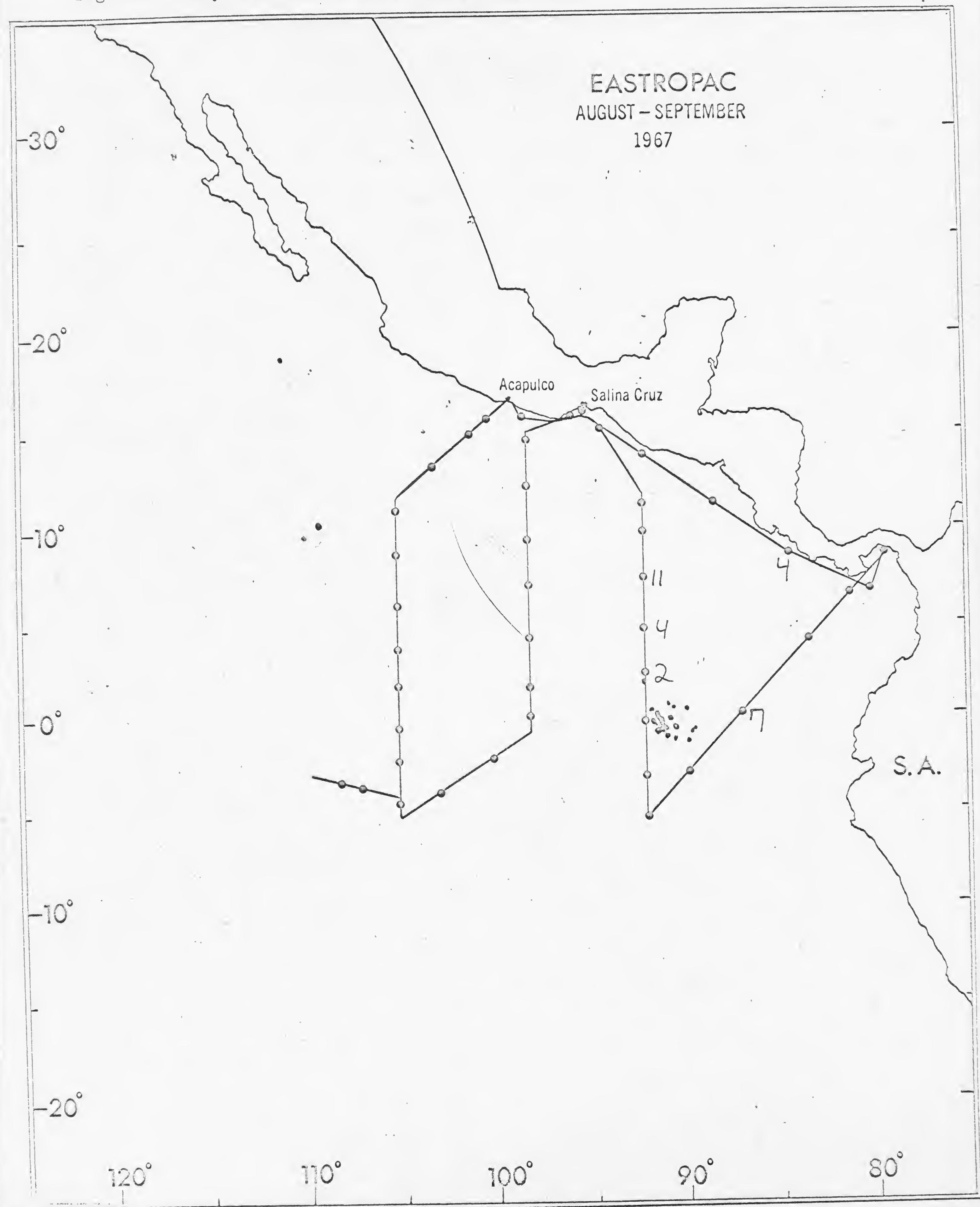


Figure 5. Daily Abundance of Wedge-tailed Shearwaters

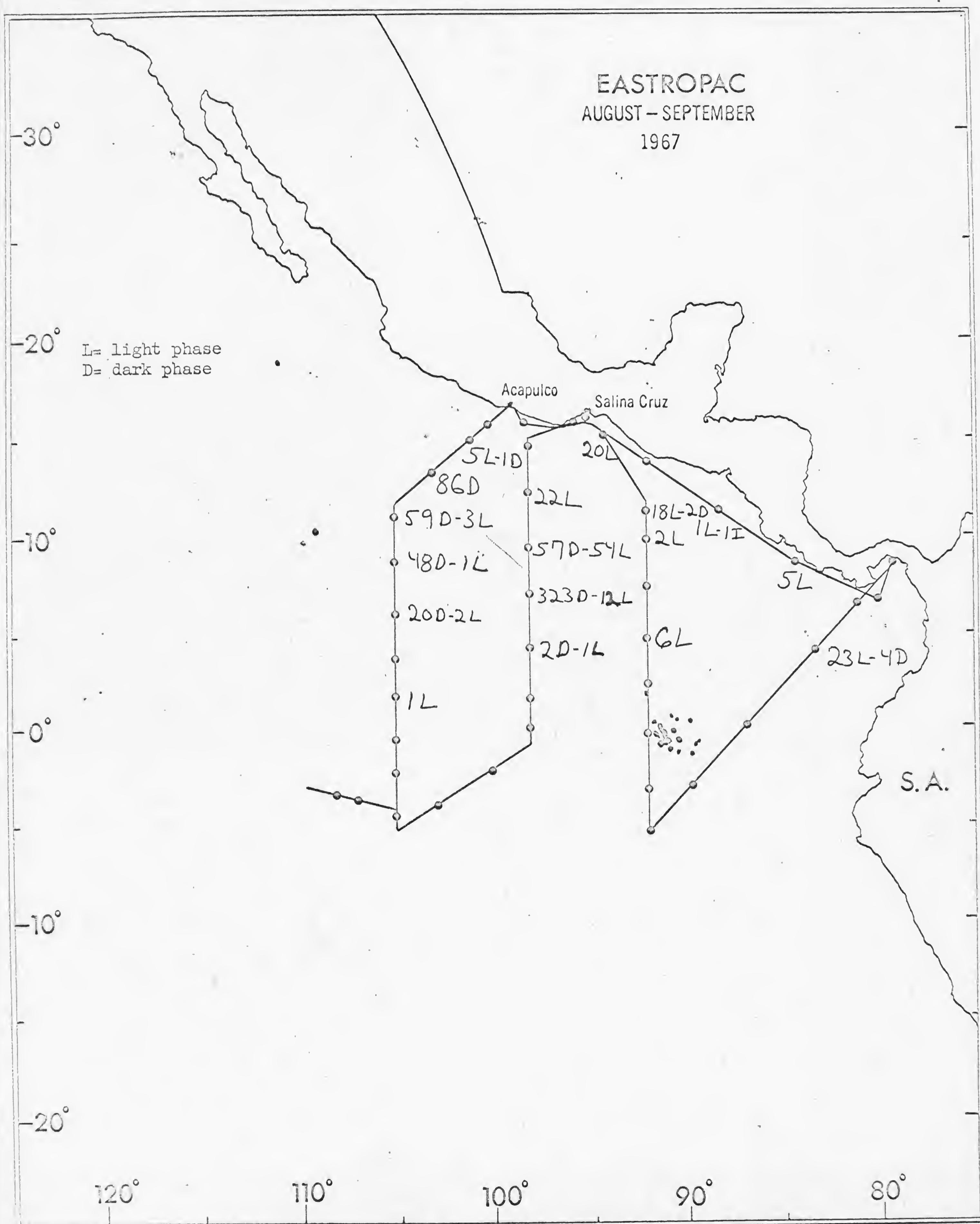


Figure 6. Daily Abundance of Dark-rumped Petrels

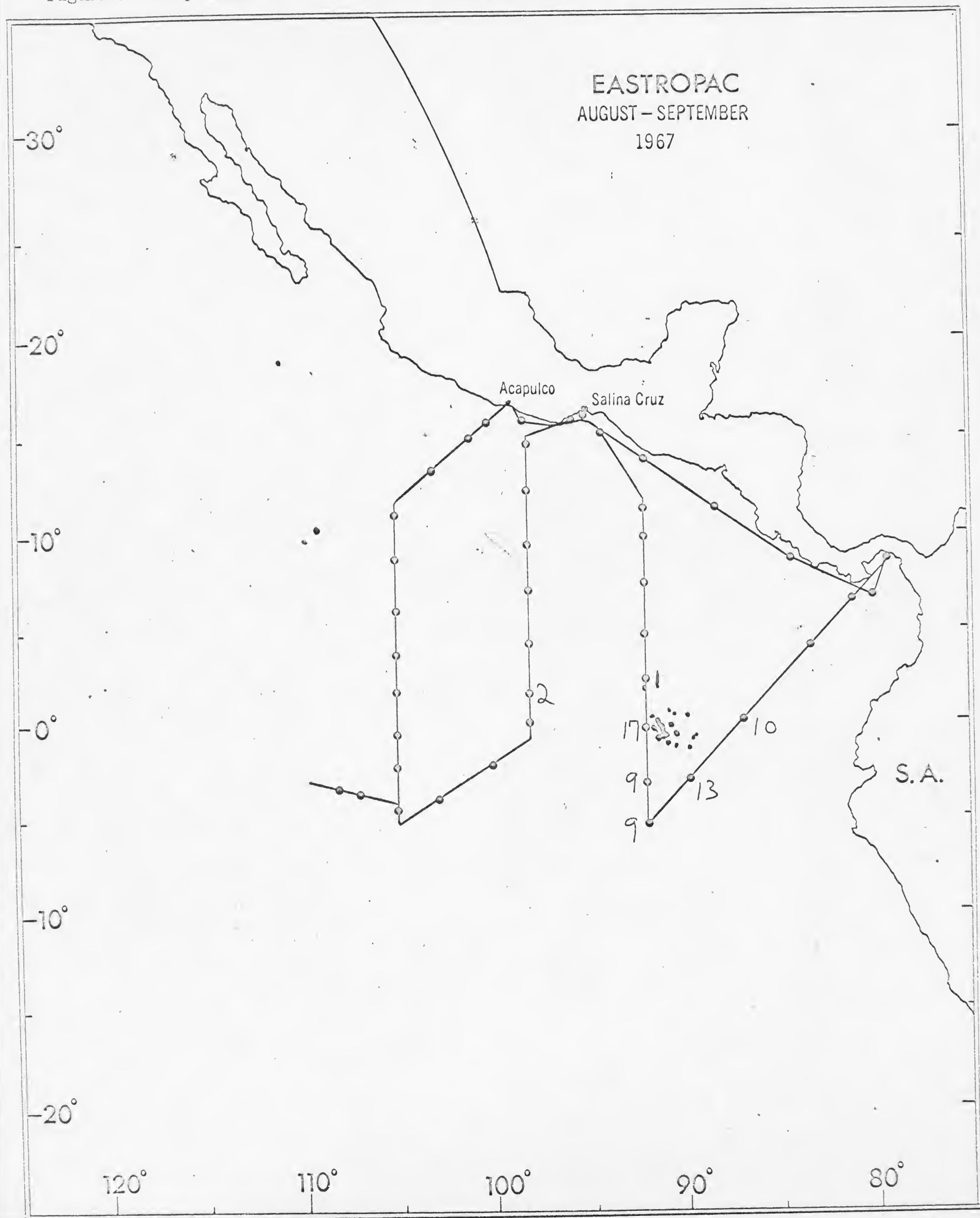


Figure 7. Daily Abundance of Juan Fernandez Petrels

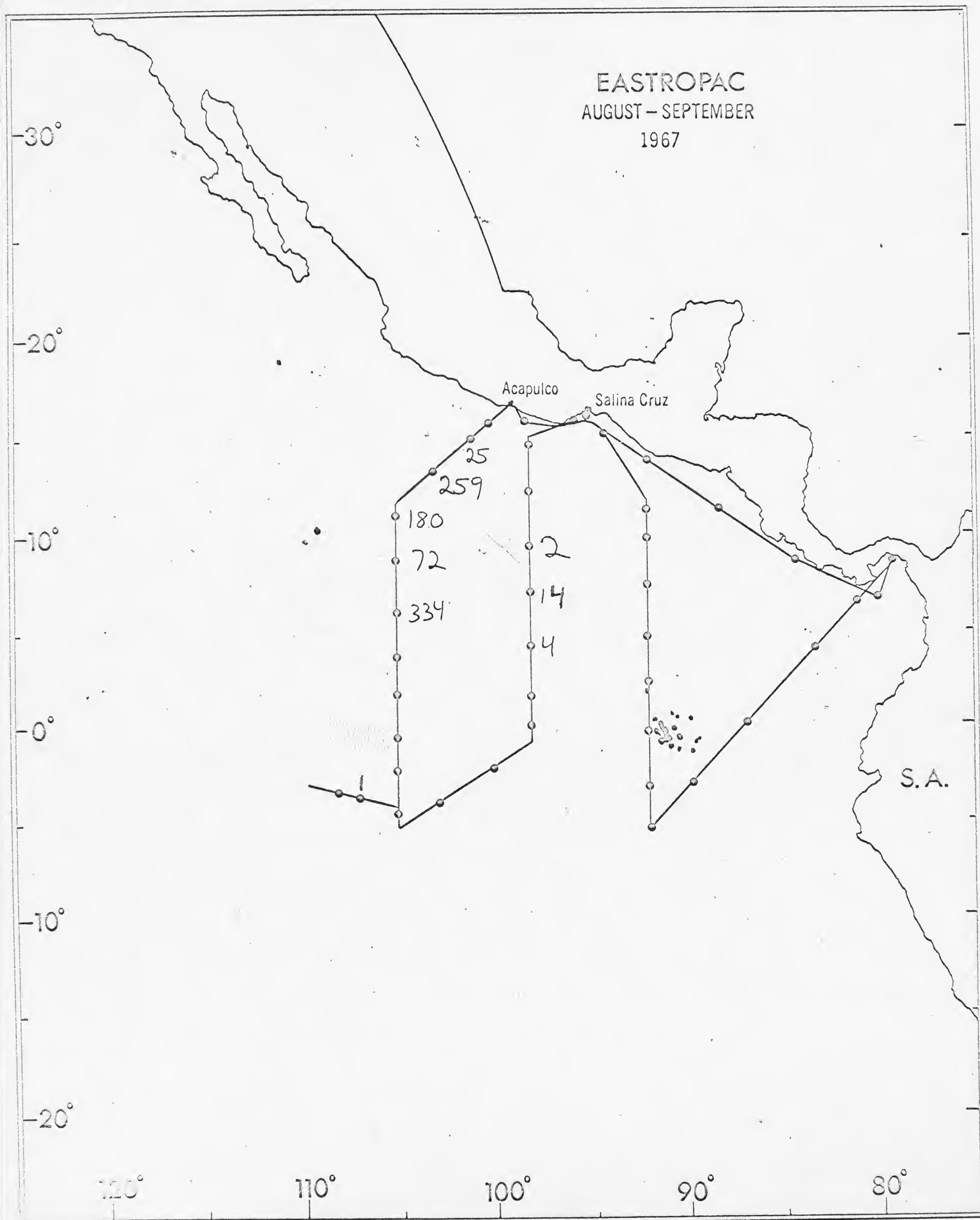


Figure 8. Daily Abundance of Kermadec Petrels

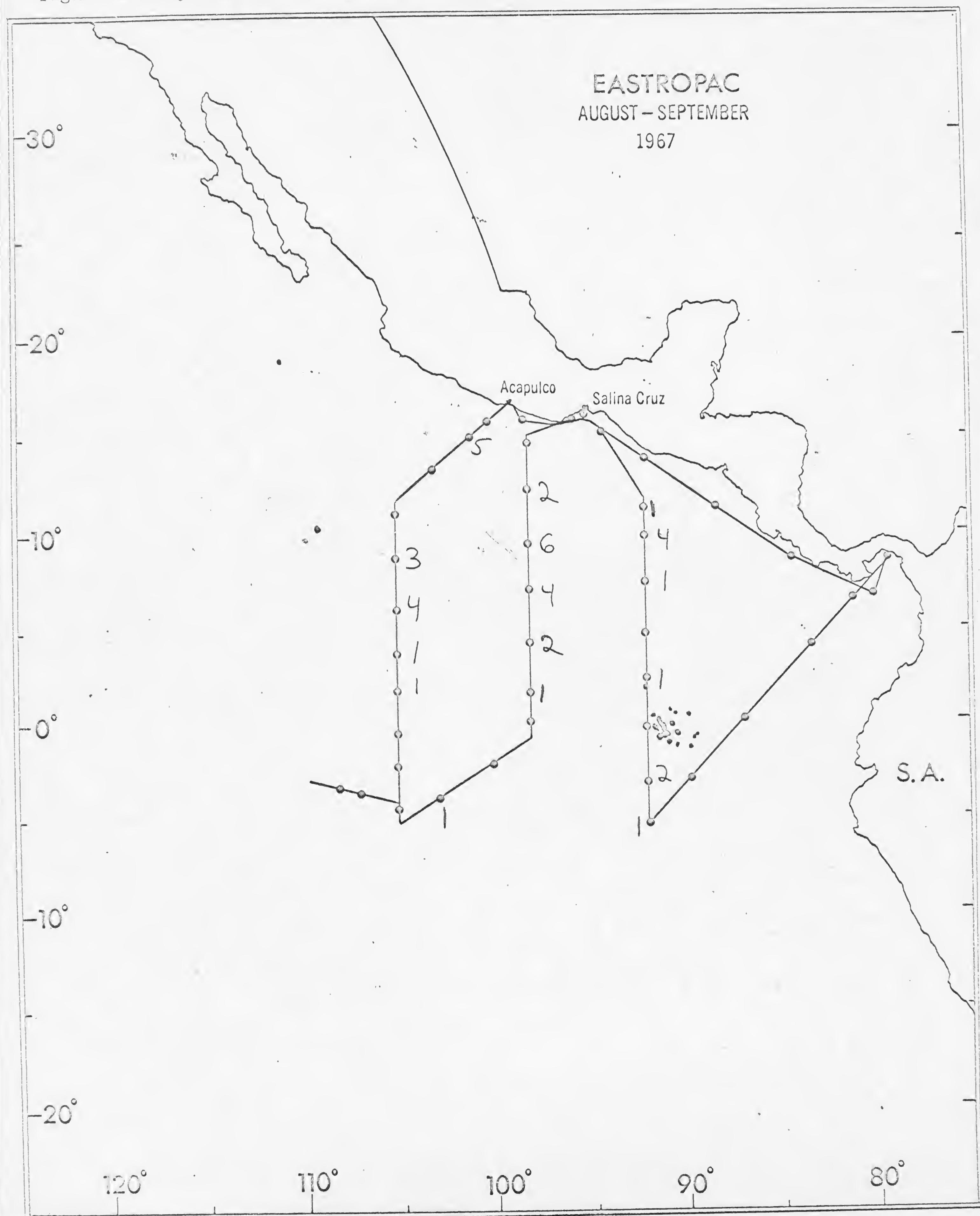


Figure 9. Daily Abundance of Collared Petrels

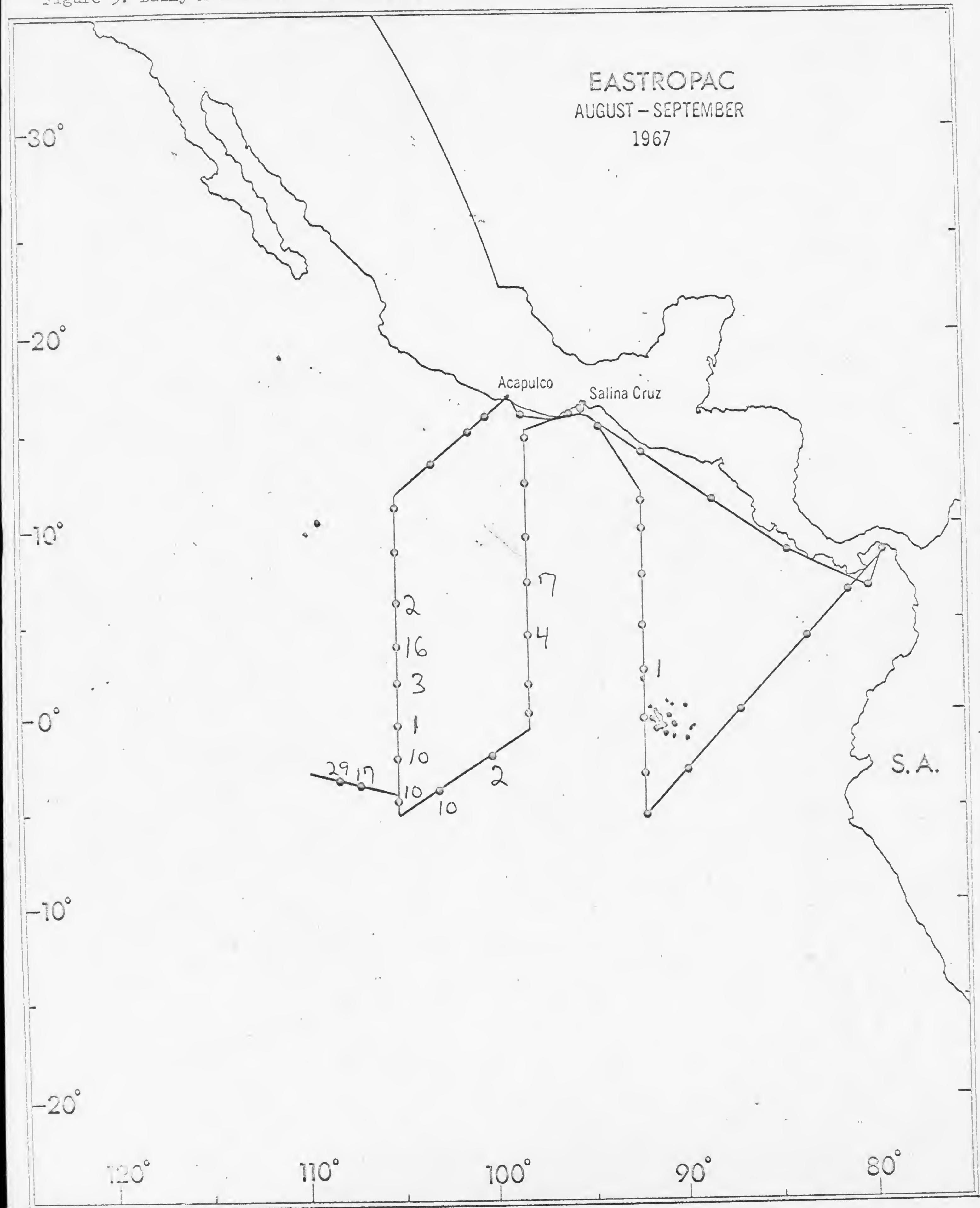


Figure 10. Daily Abundance of White-faced Storm Petrels

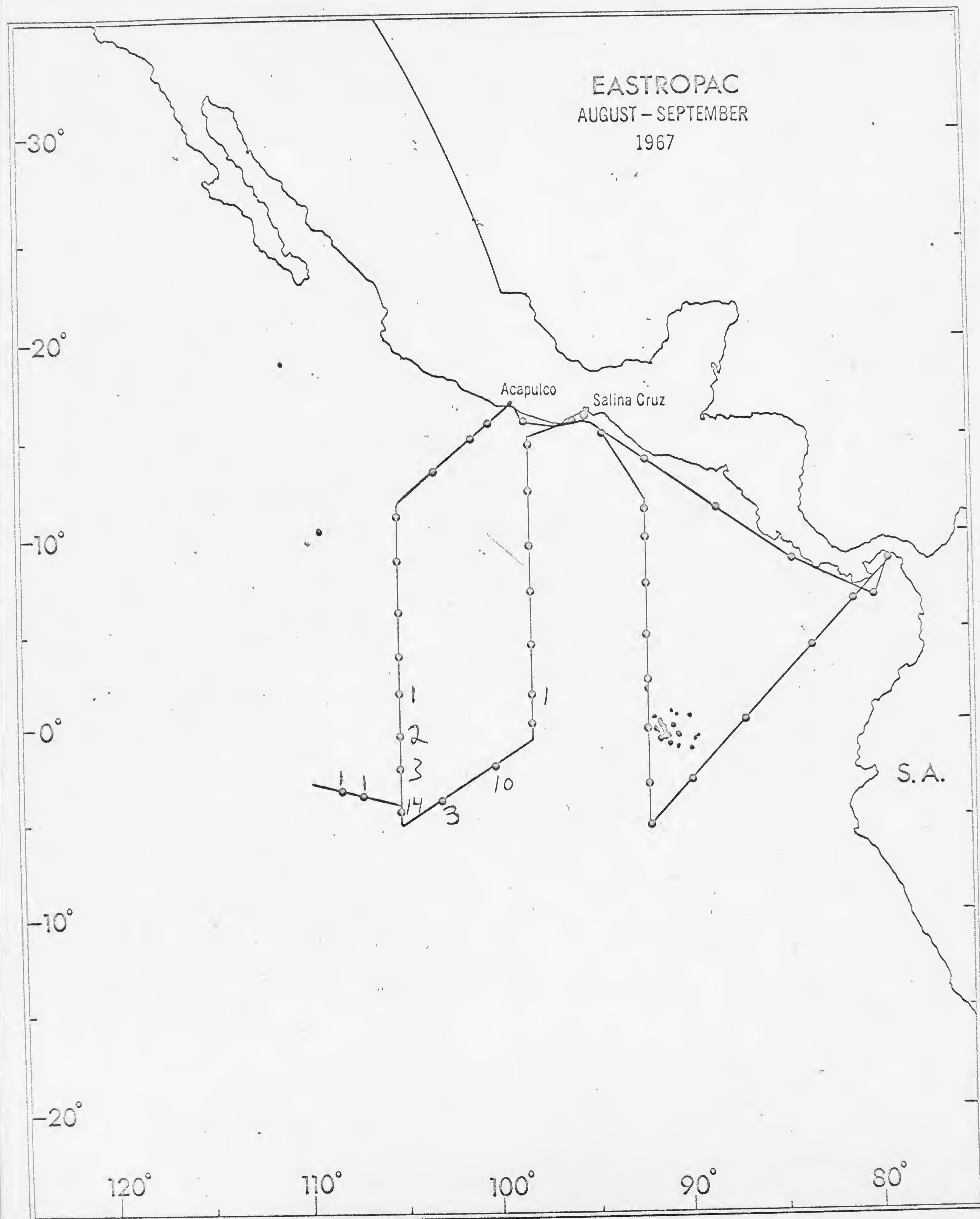


Figure 11. Daily Abundance of Galapagos Storm Petrels

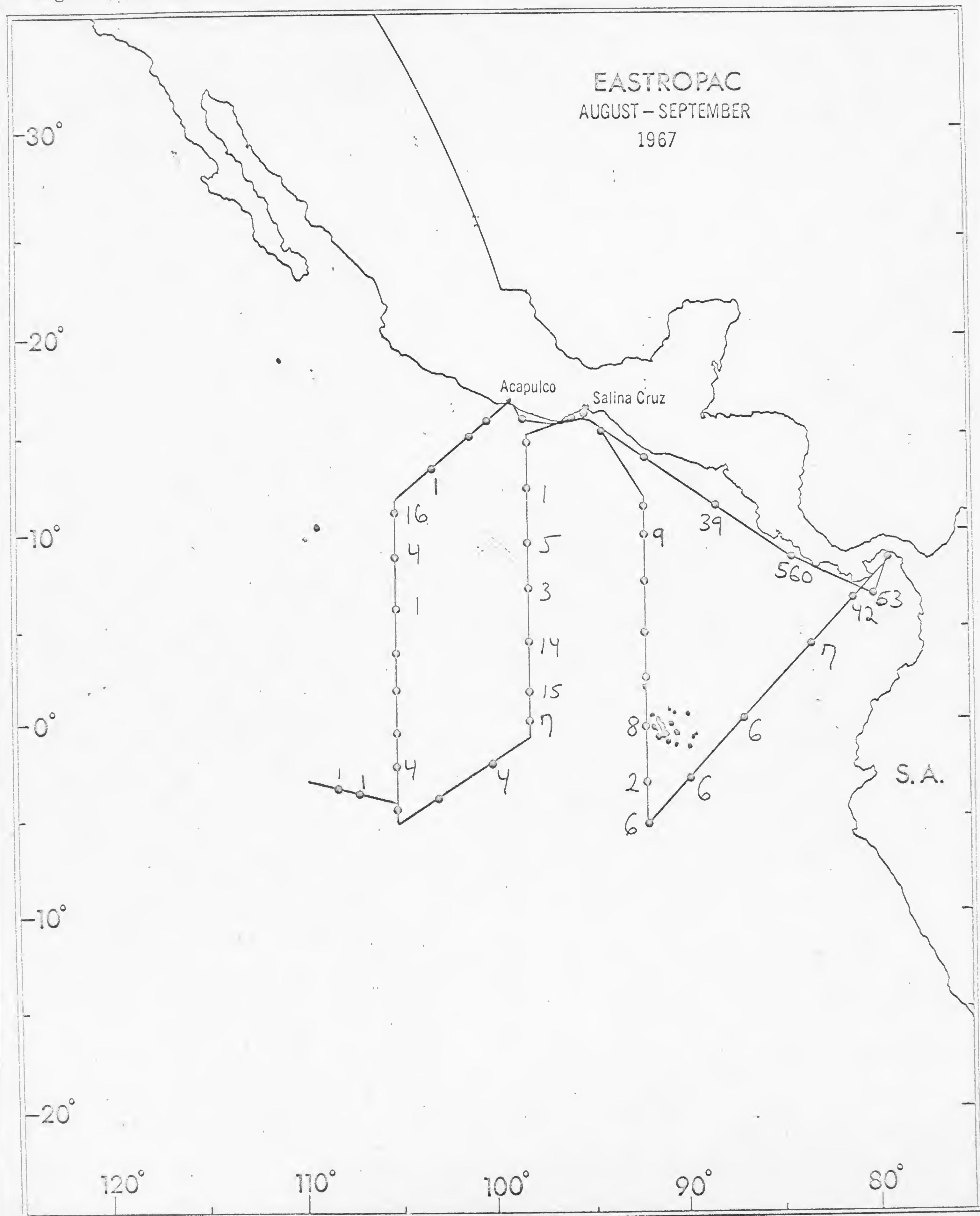


Figure 12. Daily Abundance of Leach's and Harcourt's Storm Petrels

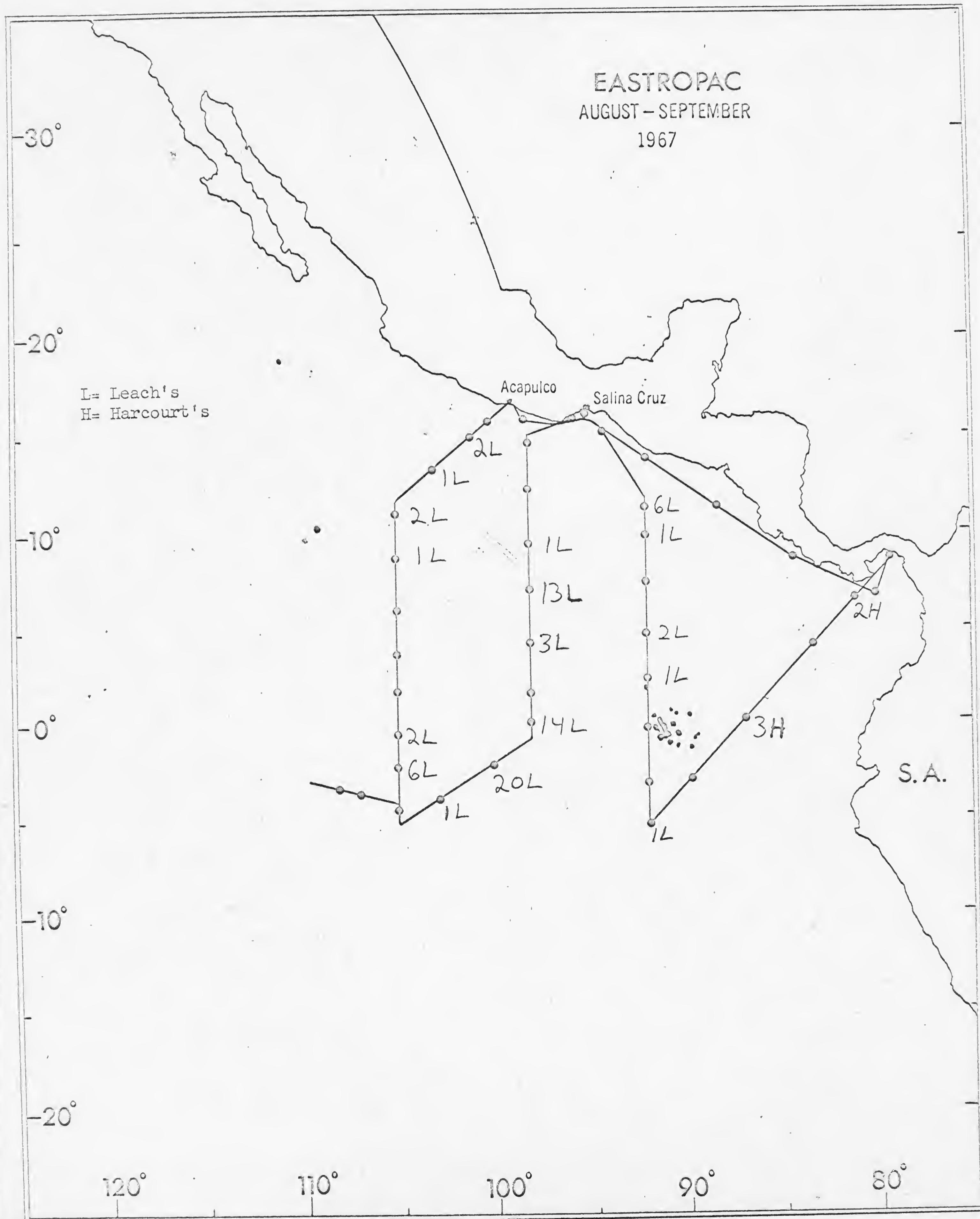


Figure 13. Daily Abundance of Markham's and Black Storm Petrels

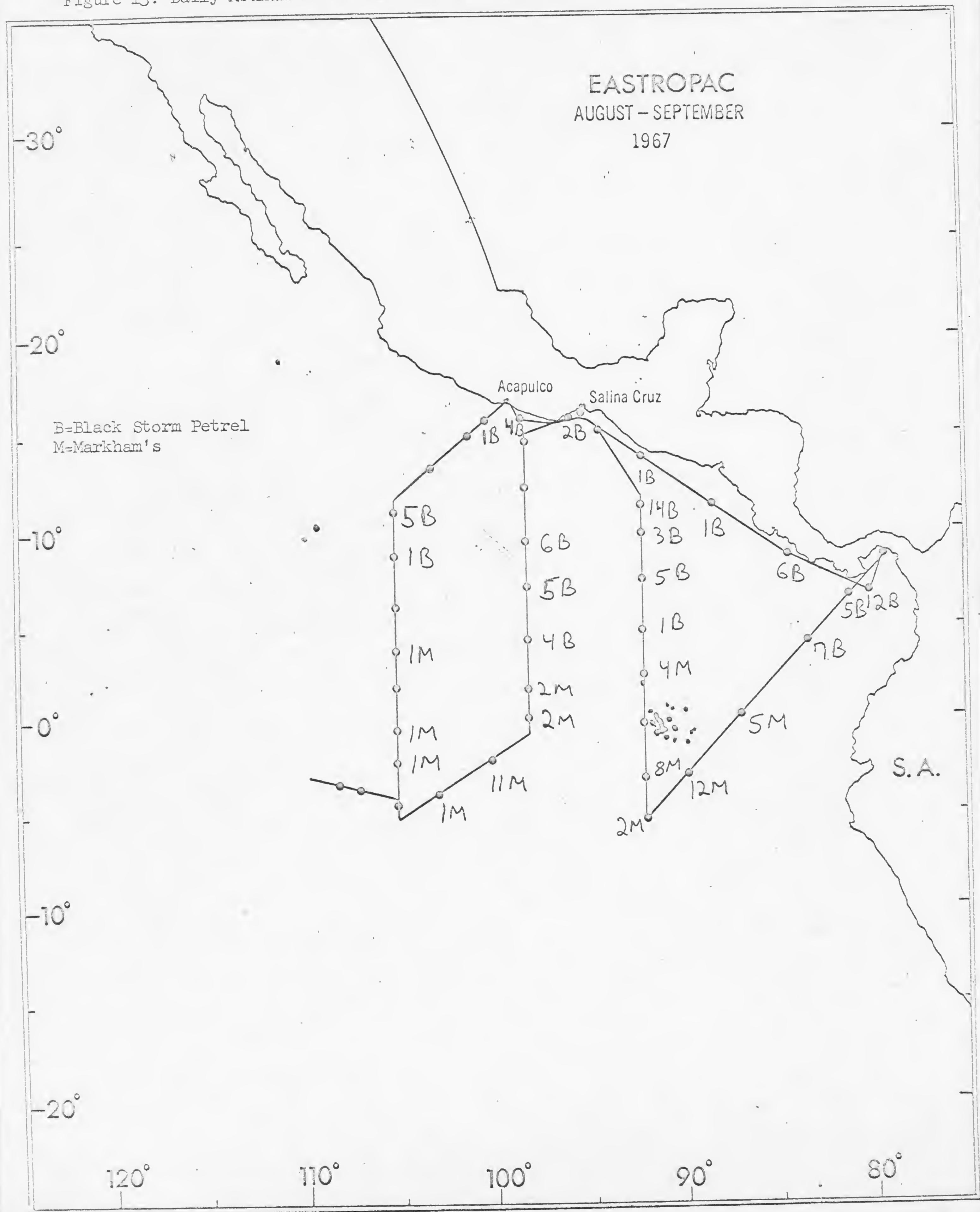


Figure 14. Daily Abundance of Blue-faced Boobies

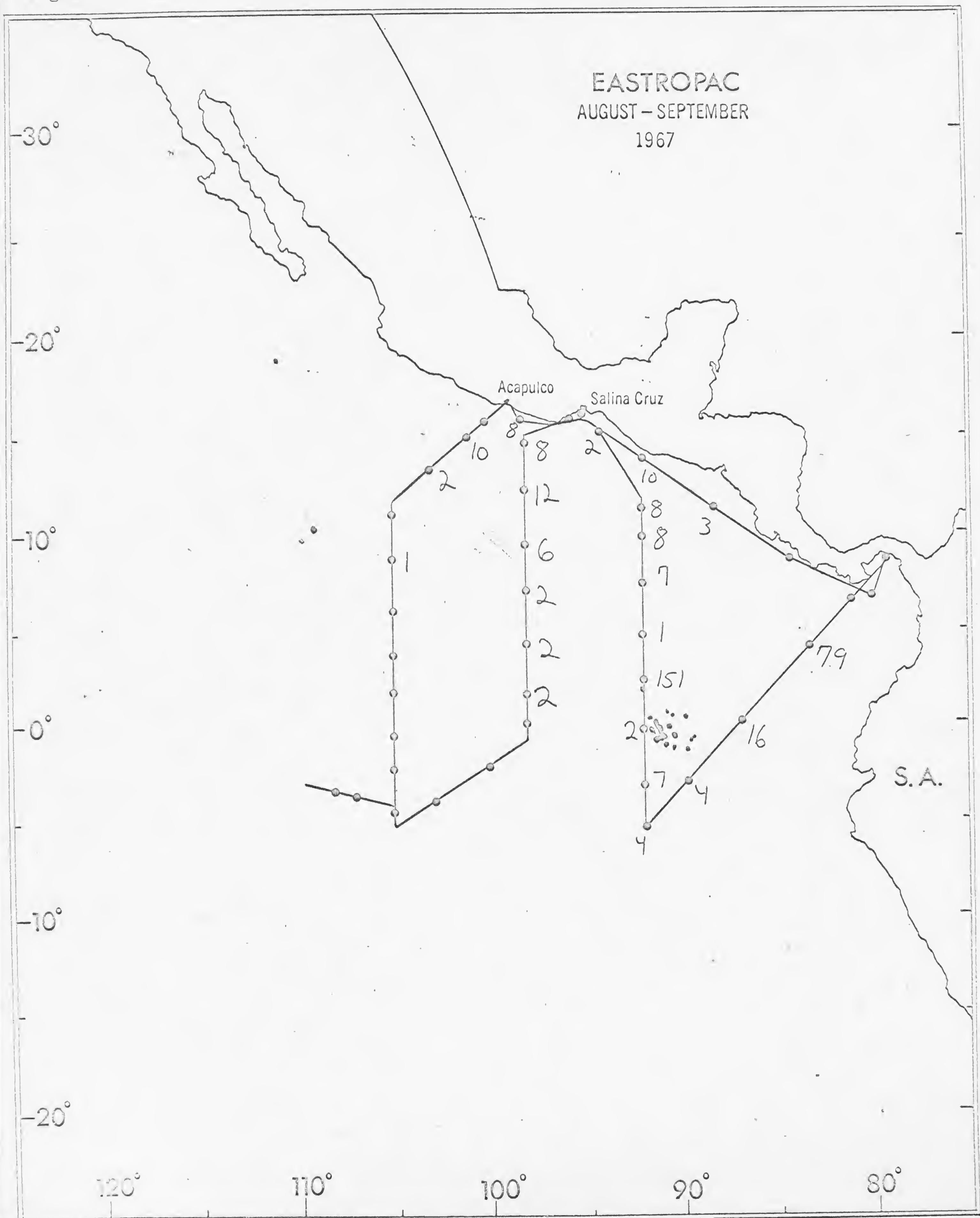


Figure 15. Daily Abundance of Red-footed Boobies

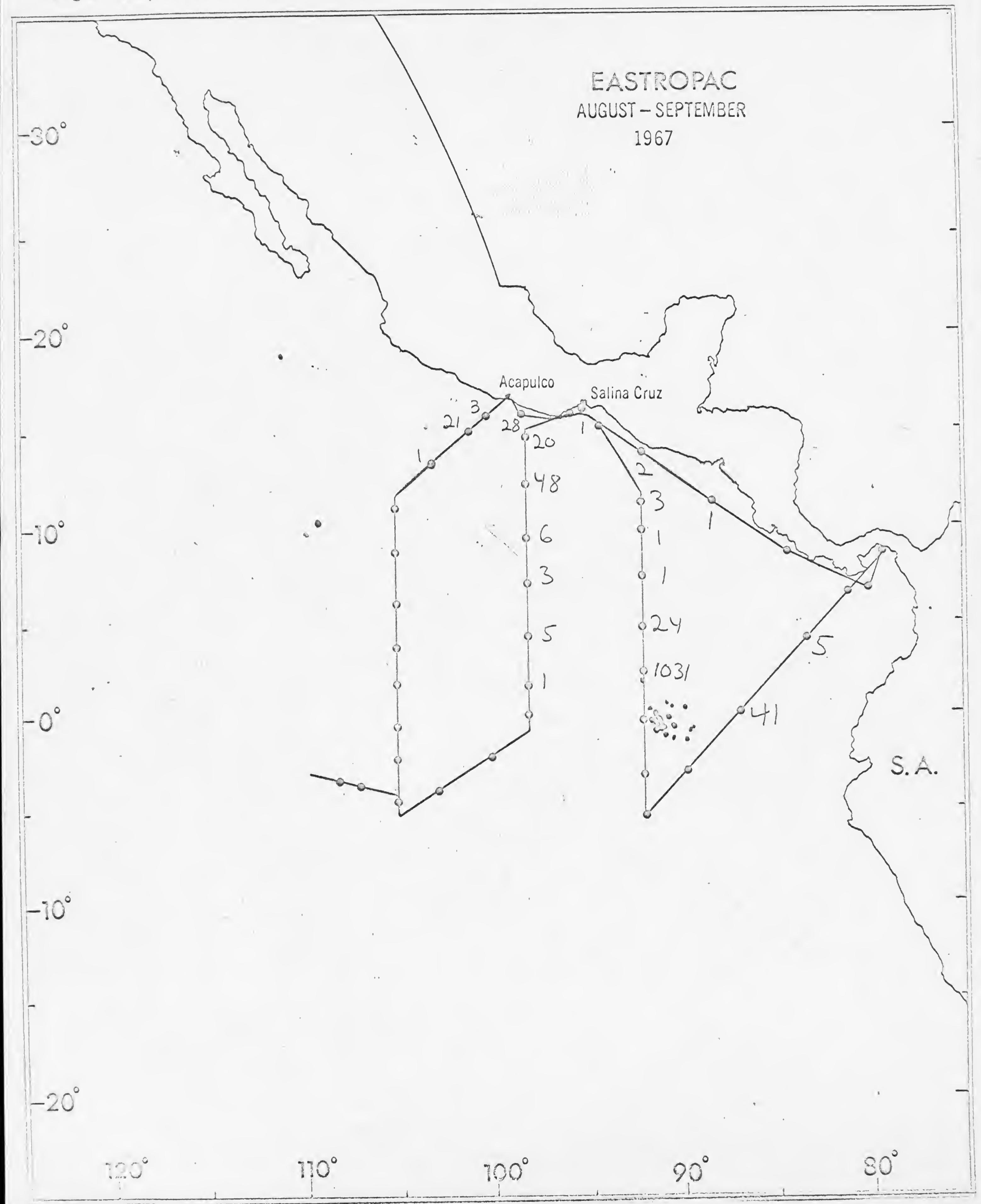


Figure 16. Daily Abundance of Sooty Terns

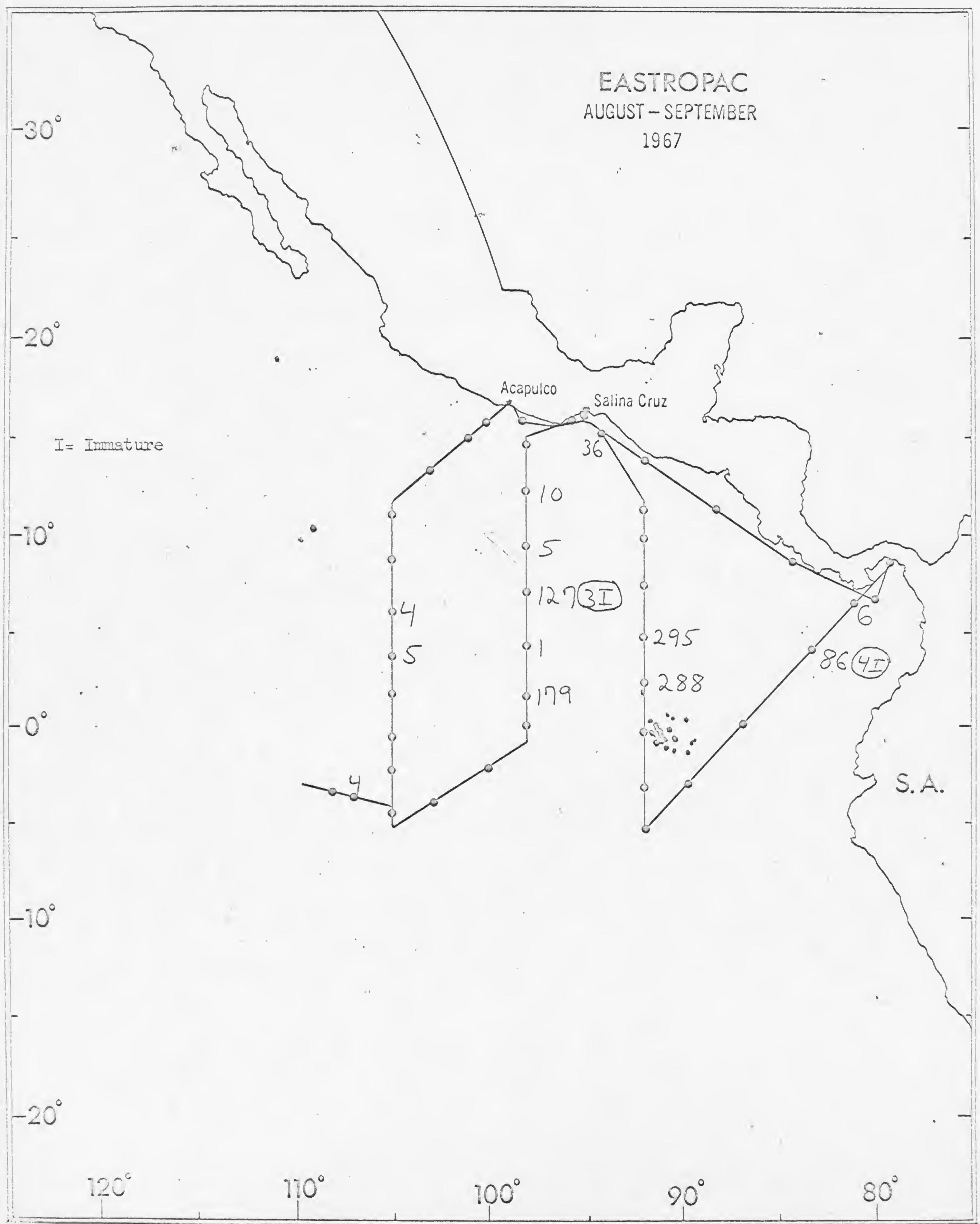


Figure 17. Daily Abundance of Flocks

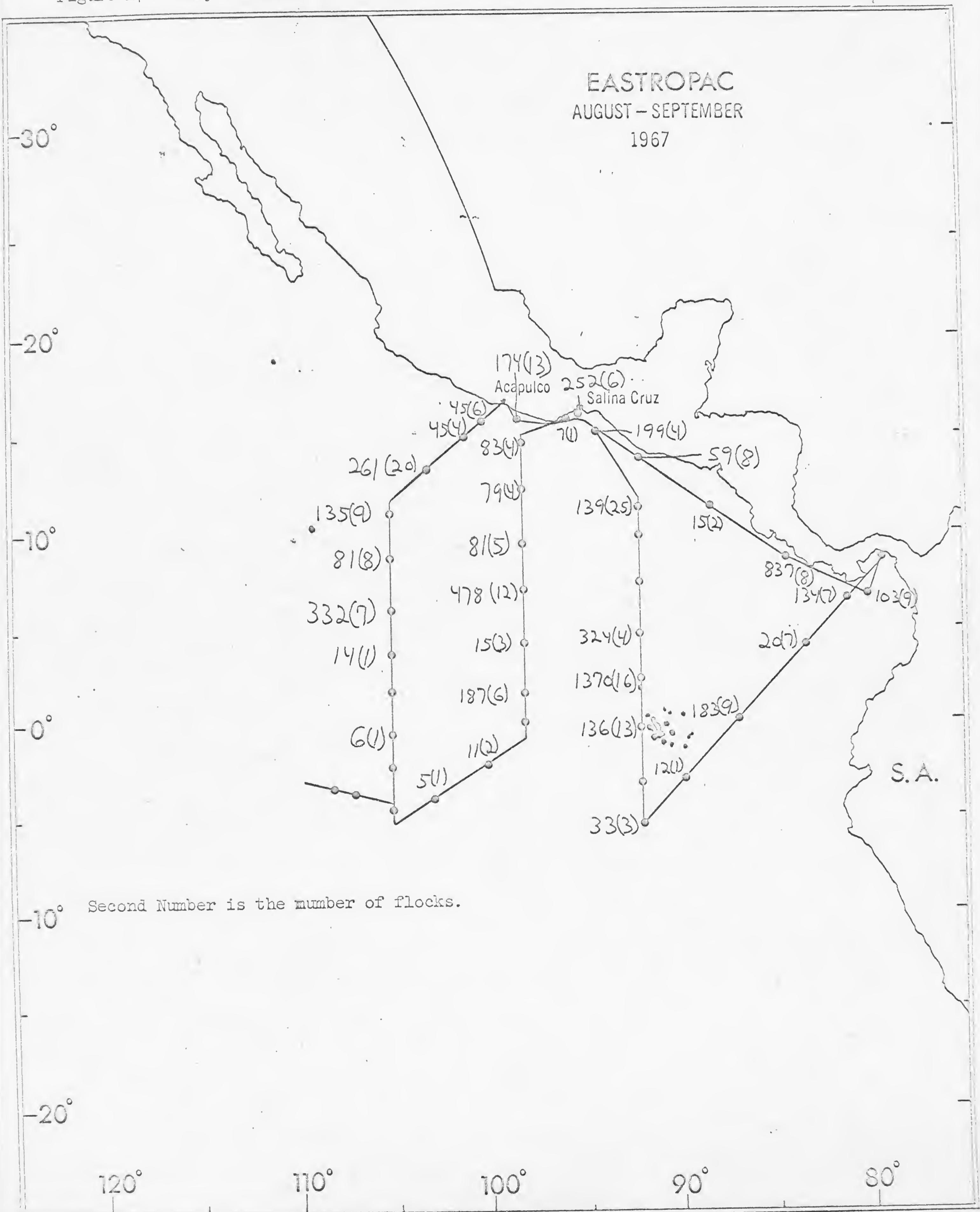


Figure 18. Daily Abundance of Feeding Flocks

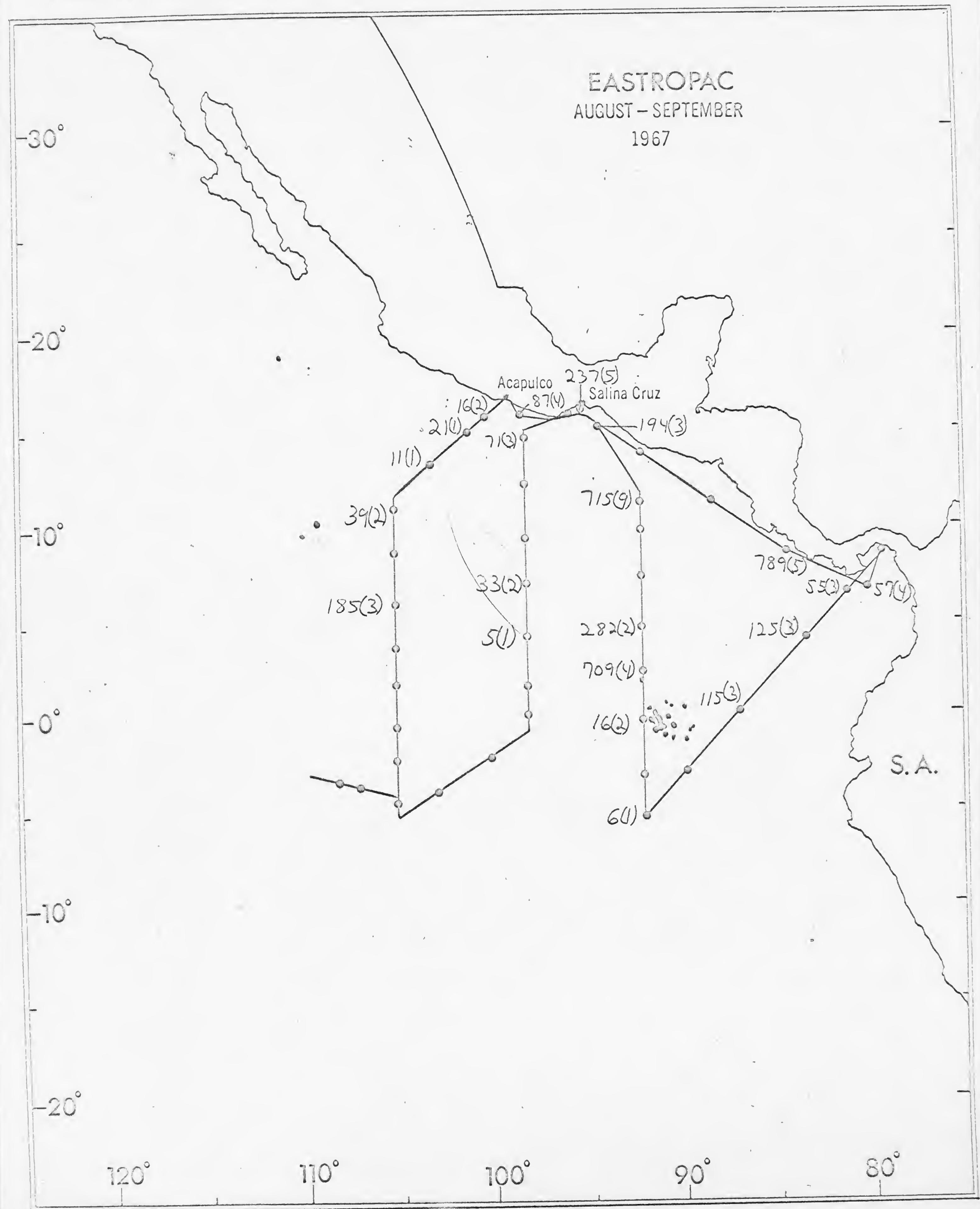


Figure 19. Daily Abundance of Flocks That Could Be Associated With Fish Schools

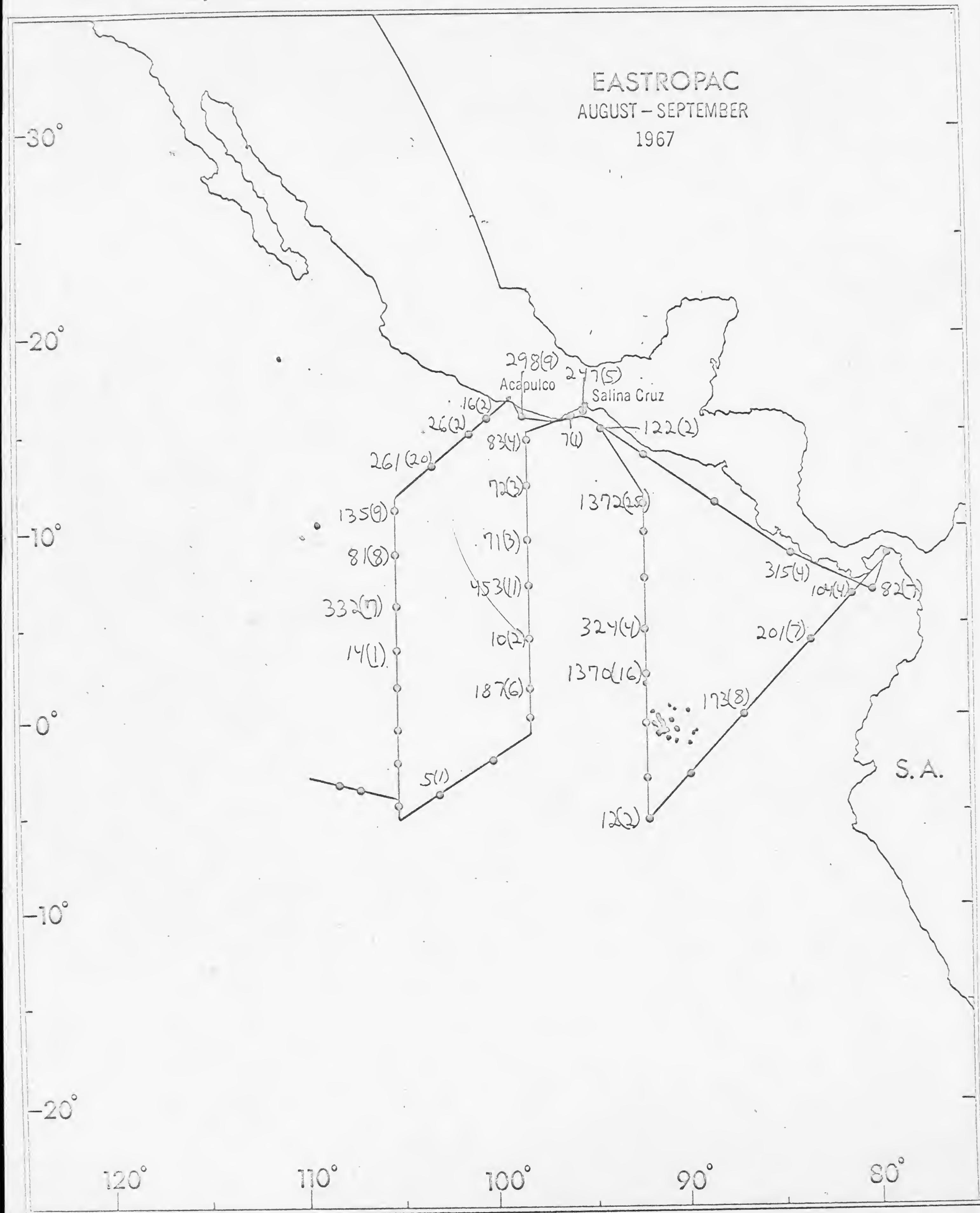


Figure 20. Daily Abundance of Flocks of Plankton Feeding Birds

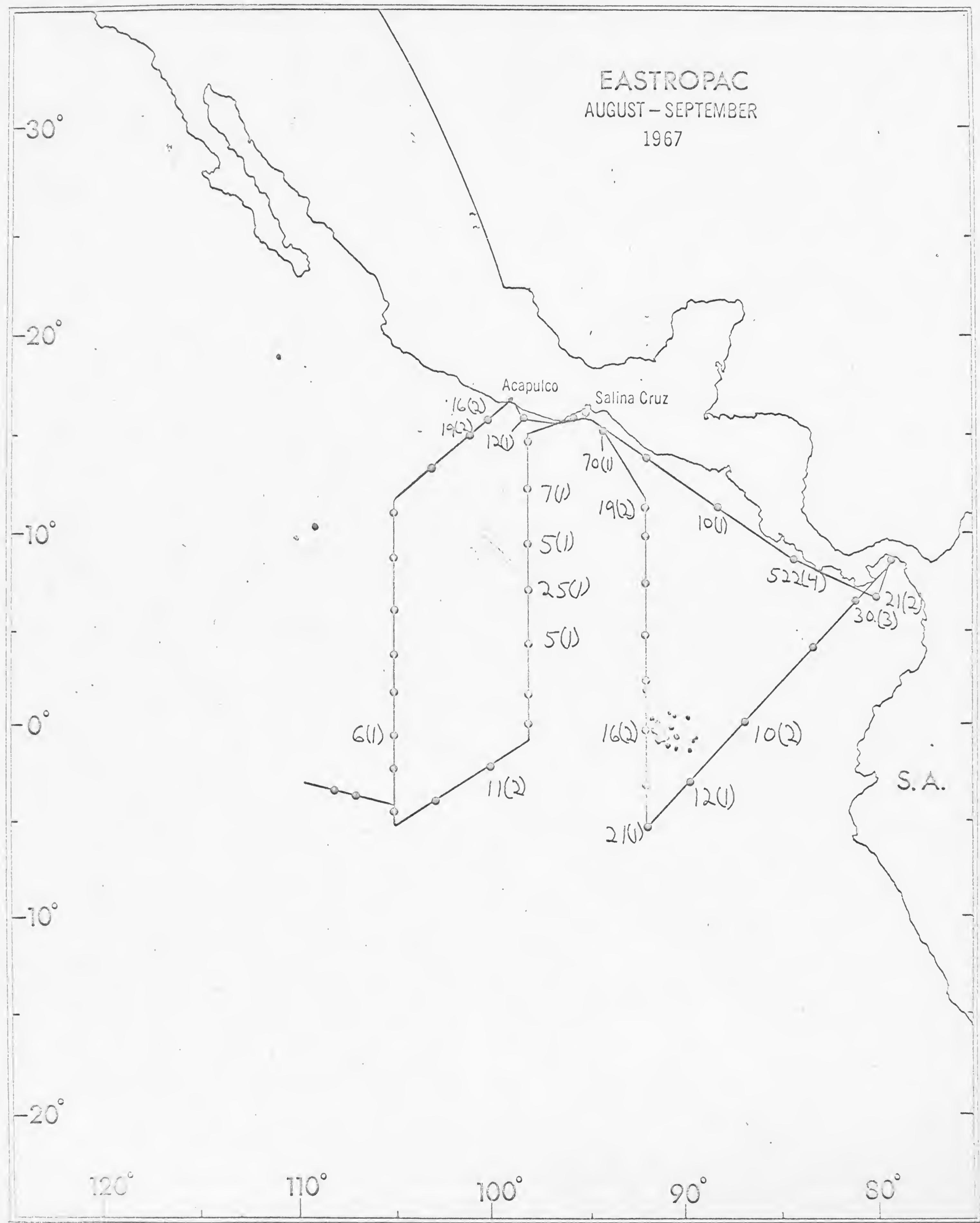
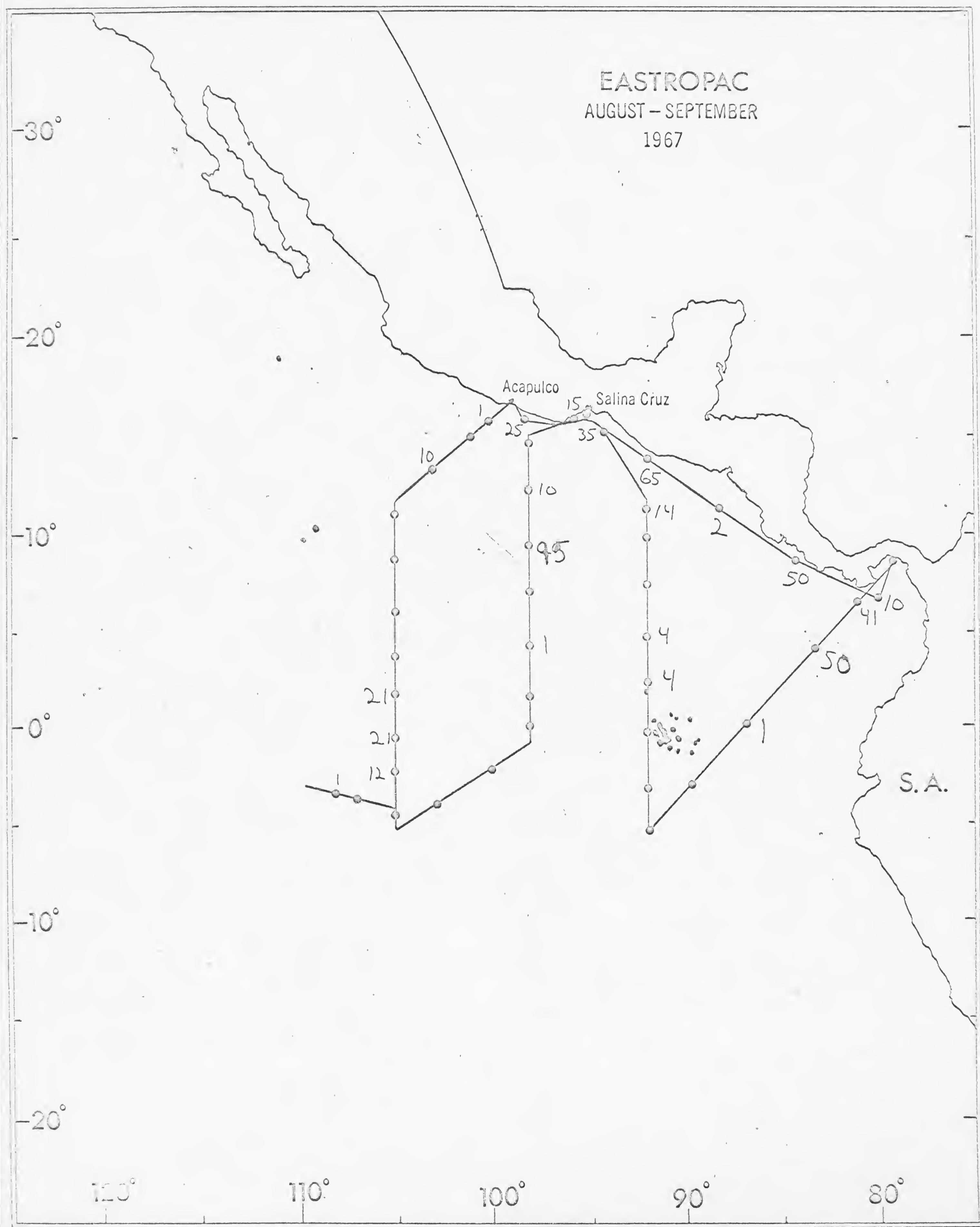


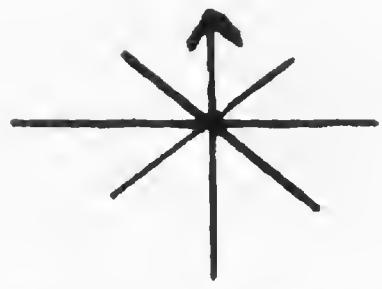
Figure 21. Daily Abundance of Cetaceans



2000  
SDATE 29 July 1967  
Pg. # 1

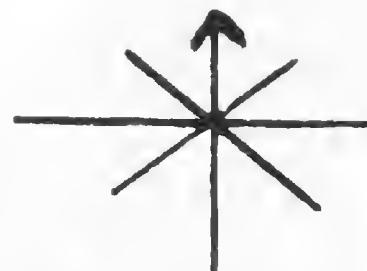
time	species	#	dir.	hgt.	remarks	loc.
1400					Begin Observations.	
1410	Bind	1	S			
1420	Larids	4	Ø			
1440	Frigate	1	Ø			
1445	Frigate	1	Ø			
FF 1450	Sooty Tern	45 ± 5				
	C. Noddy	5	Ø		Feeding	
	Bl. Tern	1				
1500	Pearl Tern	2	E		adults	
1505	Frigate	2	Ø			
1513	Terns	1	Ø			
1515	Terns	4	Ø			
TF 1520	Sooty Tern	2	NE		adults	
1525	Terns	11	NE			
1534	Bridled Tern	1	NE			
FF 1536	Terns	2	NE		appeared to have white collar - lighter back	
FF 1550	<del>terns</del>	10	Ø		feeding	
1555	<del>Sooty Tern</del>	2	Ø		some feeding	
	Sooty Tern	35 ± 5			adults	
	C. Noddy	6			adults	
	Bl. Tern	1			breeding plumage	
FF 1555	Sooty Tern	25 ± 5			feeding	
FF 1608	Sooty Tern	6			adults feeding	
TF 1610	C. Noddy	6	E		Traveling	
1615	Frigate	1	Ø		adult male.	
MF 1625	Shear-Pet	1	Ø			
1645	Sooty Tern	5	Ø		Probably Great Shear. White underneath mottled gray dorsally appeared to have white rump. Distant.	
1700					Case Obs.	
1730					Resume	
1733					C/Ø 225°	
FE 1734	C. Noddy	6	Ø		feeding	
F 1740	Tern sp	10 ± 2				235
F 1750	Sooty Tern	18 ± 2			appeal to be feeding	18
F 1756	Terns (yrs)	25 ± 5	Ø		adults feeding	33
					feeding.	

220+



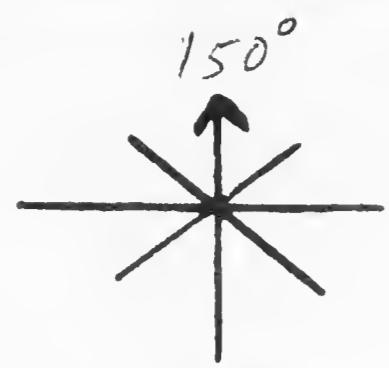
DATE 29 July 1967  
Pg. # 20

time	species	#	dir.	hgt.	remarks	loc.
FF 1805	tern sp1	30±5			feeding,	
1806	frigate	1	Ø			
FF 1825	Sooty Tern	30±3	Ø			
	tern	1	Ø		Some feeding	
	frigate	3	Ø			
<del>1830</del>					<del>Initial Observations.</del>	
FF 1833	Sooty Tern	11	Ø		Some feeding	
1834	Laughing Gull	1	Ø			
1835	Laughing Gull	1	Ø		molting - non breeding plumage	
1840	Sulid	1	NE		molting	
1848	Laugh Gull	1	Ø		distant possible Barnet	95
FF 1857	Sooty Tern	15±2			adult breeding plumage	
1900					feeding	
					<del>Final Observations.</del>	



DATE 30 July 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0830					begin	
0832	Sooty Tern	3	SE		Sunny. Few clouds. Calm.	
0837	Sooty Tern	1	SE		<del>begin</del>	
0839	tern	1	E			
0845	Sooty Tern	4	SE			
0852	tern sp	4	O			
0854	Sooty Tern	2	S			
0859	tern sp	3	O			
0907	Tern (sp)	1	SE			
SF	0922	Sooty Tern	6	O		
	0925	Bridled Tern	1	SE		
	0926	tern	3	SE		
	0929	Bridled Tern	1	SE		
	0955	tern	1	SE	Wing beats not as deep as <u>S. fuscata</u> More white over eye.	
	1000				Cease Obs.	
	1200				begin obs.	
	1210	Sooty Tern	26	SE		
	1230	Tern sp	2	O		
TF	1237	Sooty Tern	1	O		
	1300				Cease Obs.	
	1530				begin obs - Cuba 20-30 miles to left.	
	1535	Tern sp	20	SE	appear to be feeding. Distant	
	1545					
	1615	Bridled Tern	1	E	Two Cetaceans heading SE. Large, dark gray	
	1630				about 10'. Small dorsal fin triangular	
	1730				dorsal fin placed well-back. Blunt	
	1739	Sooty Tern	60	S	forehead. No peak seen. When surfacing, head appeared first, arched dorsum, then fin and very shortly after, fin under water. Blow area well-developed - indented	
FF	1830				area	

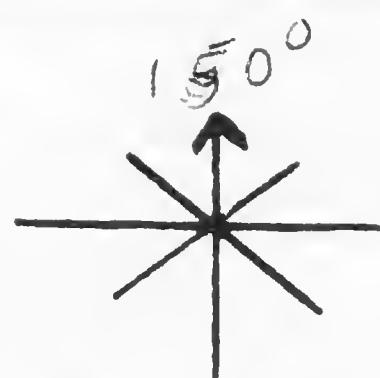


DATE 31 July 1967  
Pg. # \_\_\_\_\_

time species # dir. hgt. remarks

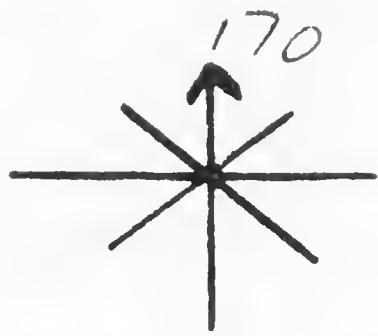
loc.

time	species	#	dir.	hgt.	remarks
1500					Begin Cane.
1600					
1815					
1743	Shrub	1	0		Begin Cane
1815					



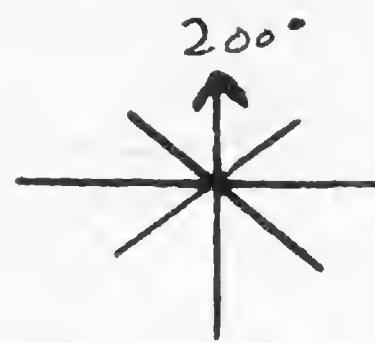
DATE 1 August 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
1130					Begin	
1220	Red f Booby	1	NE		adult gray phase	
1230					Leave	
1330					Resume	
1350	Sooty Tern	1	SE			
1432	Red-f Boob.	2	N E		adults - white phase + gray phase	
1442	tern sp	2	Ø			
FF 1500	tern sp	10	+2		feeding	
	booby sp	3				
1510	tern sp	2	Ø			
FF 1525	Sooty? Tern	15	+2		feeding	
	Booby sp	3	Ø			
1530					Leave	
1730					Begin	
1808	Sooty? Tern	1	W			
1830					Leave Obs.	



DATE 2 August 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
1000					Begin obs.	
1002	Sooty Tern	2	E			
1004	Sooty Tern	2	E			
1020	Sooty Tern	1	S			
1025	Sooty Tern	2	Ø			
1030	Sooty Tern	3	SW			
1040	Sooty Tern	2	Ø			
1100					Leave.	



EASTROPAC

DATE 7 August 1967  
Pg. # 1

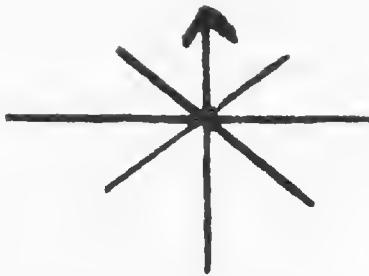
Day 1

time	species	#	dir.	hgt.	remarks	loc.
0615					sunrise Begin obs	
0635	O. Tethys	5			Following ship	
0635	Black Storm Pet	5				
0636	Brown Booby	1				
0650	Brown Booby	1				
0705	Pom. Jaeger	1			light phase Warm plumage.	
0718	O. Tethys	1	Ø			
0719	Br. Booby	2	W		1 subadult	
0719	Swallow	1	Ø			
0728	BL. STorm Pet	1			following ship	
0740	Storm Petrel	2	Ø			0300-17
0743	Br. Booby	1				0500-18
0744	O. Tethys	1	Ø		adult	0800-19
0750		2	Ø			BB-20
0752	Bind	1	Ø		% 220°	1100-21
0758	BL STorm Pet	1				1400-22
0810	O. Tethys	3	Ø			1700-23
0813	O. Tethys	3			following ship.	2000-24
0818	Br. Booby	1	Ø			2300-25
0820	O. Tethys	2	Ø		Subadult.	0100-26
0820	Shorebird	1				0400-27
0831	Black Tern	2	W		winter plumage	0700-28
0831	NO Phalarope	1	W		winter plumage	1000-29
0836	BL STorm Pet	3	Ø			1300-30
0844	Tern sp	2	E			1600-31
0847	BL Tern	1			on log Winter Plumage	1900-32
0852	O. Tethys	1	Ø			2200-33
0855	Sabine's Gull	1			winter plumage	0100-34
0923	Br. Pelican	1			WHT20 Immature	0400-35
0935	Tern sp	1	E			0700-36
0936	Brown Booby	1	Ø		Immature	1000-37
0940						1300-38
0945	Frigate sp	2	Ø		% 240°	1600-39
0952	Com Noddy	3	ØØ			1900-40
0958	Com Noddy	3	E			0000-41
1000	Cattle? Egret	1	NW			
1001	Com Noddy	1	E			
1010	Com Noddy	2	E			
1012	<del>Sp. Tern</del>	1	SW		(seen)	
1015					Resume 065 c 2500	
1200					6 Spotted Dolphin.	
1202						



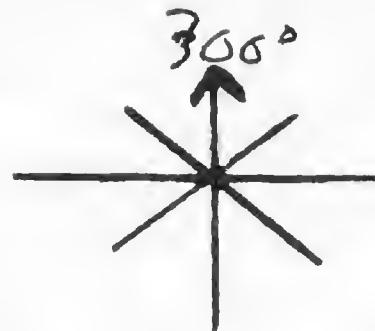
DATE 7 August 1967  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1205	O. Tethys	1	⑤			
1205	BL Storm Pet	1			following ship	
1213					SE 270°	
1215	O. Tethys	2	⑥			
1216	Co. Noddy	3	W			
1220	<del>S. Tern</del>	2	S			
1220	Com Noddy	2	S			
1220	BL Tern	2	⑥			
1225					Winter plumage	
1226	Co Noddy	3	SW		2 Turtles 3' long	
1226	tern sp	3	⑥			
1229	C. Noddy	2	SW			
1230	Br. Booby	1			Riding on Turtle (not same as above.)	
TF	1235	Com. Noddy	12	⑥ SW	loosely organized	
5F	1248	O. Tethys	11			
	1248	Frigate sp	1		sitting on H2O	
	1250	Com Noddy	3	SW	subadult	
	1254	Mag Frigate	1	⑥	adult female	
	1259	O. Tethys	2	⑥		
	1259	Br. Booby	1			
FF	1300	Com Noddy	9	⑥	A ♀ on log.	0730 - 34
	1310	O. Tethys	1	⑥	feeding	8050 - 2
	1310	BL Storm Pet	1	⑥		CNT - 62
	1320	O. Tethys	3	⑥		
MF	1323	O. Tethys	10	⑥		
	1327	BL Tern	1	⑥	winter dress	
	1328	BL Tern	1	⑥		
	1335	BL Tern	1	⑥	Breeding plumage.	
	1339	Br-winter Tern	1	W	winter plumage.	
	1348	O. Tethys	1	⑥		
	1400	O. Tethys	1	⑥		
	1403	tern sp	1	-		
	1404					
	1406	frigate	1	⑥	4 Pigeons	
	1415	BL Tern	1	S		
	1416	Com Noddy	1	S	Winter plumage	
	1423	O. Tethys	2	⑥		
	1428	Com Noddy	2	S		
	1433	C. Noddy	1	S		
	1434	Mag. Frigate	1	S	Ad ♀	
FF	1445	Br Booby	1	⑥	Some feeding	
		Com Noddy	24	⑥		



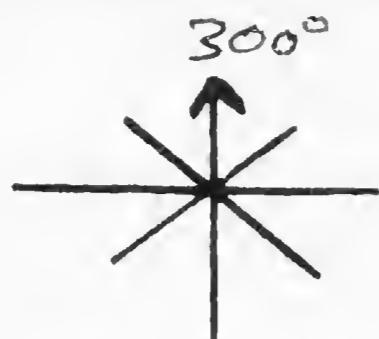
DATE 7 August 1967  
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
FF 1500	Com Noddy	15			some feeding	
1501	O. tethys	2	o			
1510	O. tethys	4	o			
FF 1515	Com Noddy	8	o		some feeding	CNT-36
1517	O. tethys	3	o			Stellw. - 12
1518	Non Phala	4			winter plum on 1/20	11 Phala - 4
1519	<del>A. tethys</del> <sup>Mac</sup> S. Sh	1			feeding	Albat. - 1
1519	Bla Tern	4			winter plum age.	67 com - 11
TF 1525	C. Noddy	8	SE			BB - 1
TF 1527	C. Noddy	5	S			
1529					3 T turtles 3' long	58
1530					(care)	
1730					resume	
1735	O. tethys	2	o			
1740	O. tethys	1	o			
1745	Br Boddy	1	o			
1800					(care observations)	
						12 118 190 52 73



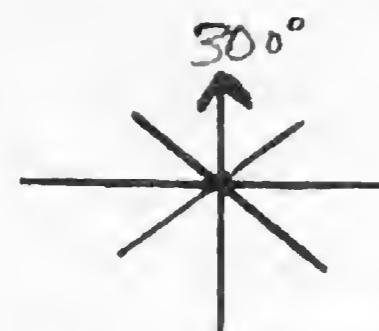
DATE 8 August 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0630						
0635	O. Tethys	1	o		Begin Obs. Land on right	
0640	O. Tethys	1	o			
0644	tern sp	1	o			
0649	tern sp	2				
0650	Bl Tern	1			winter plumage	
0651	Br. Booby	1				
0655	<del>Shear</del>	1			on the o.	
0656	Bl Stomat	1			following ship.	
0658	Br Booby	1				
0702	Br Booby	2				
0704	O. tethys	1				
0706	O. tethys	4			following ship	
0715	C. Noddy	1				
0716	Br (col) Brown	1			Ad o) on log.	
0725	O. tethys	2	o			
0735	Bl Stomat	1			Following ship	
0740	<del>Manx</del> <del>Albatross</del> <del>Sh</del>	1	o			
0744	tern sp.	1				
0745	Com Noddy	1				
0747	Com Noddy	3				
0748	Com Noddy	3				
0754	Com Noddy	4				
0757	Com Noddy	2			one Immature.	
0802	O. tethys	2	o			
0809	Com Noddy	3				
0809					Turtle 15"	
0814	Br Booby	1				
0815	Com Noddy	1				
0818	<del>Manx</del> <del>Albatross</del> <del>Sh</del>	1				
0827	Com Noddy	3				
FF	0835	Brown Booby	12		feeding Distant	
		Com Noddy	20			
SF	0838	Com Noddy	16		Scanning	
SF	0845	Com Noddy	20		Scanning	
	0848	Com Noddy	2			
	0848	Bl Tern	1		winter plumage	
	0848	O. Tethys	2	o		
	0850	Bl Tern	2		winter plumage	
	0850	Com Noddy	3			



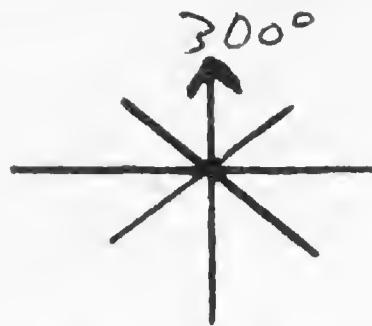
DATE 8 August 1967  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
0855						
0900	Br. Booby	1				126
0900	O. Tethys	3				
0901	Bl. Storm Pet	1				
0902	Bl. Storm Pet	1				
F 0903	O. Tethys	300 ± 100			Feeding? Sitting on the 0 in dense clump	
F 0908	O. Tethys	200 ± 50			ditto above	
0908	Nor. Phalarope	3				
0915	O. Tethys	3			winter plumage	
0916	N. Phalarope	3				
0918	Com Noddy	1				BB-6
0920	Soline's Gull	2			adult winter plumage.	BB-536
0927	C. Noddy	1				
0929	R-B Tropic	1				BB-4
0936	Frigate	2				BB-6
0936	O. Tethys	2				SNT-2
0936					50 ± 10 porpoise	
0945	Br. Booby	1				
0950		2				
FF 0955	O. Tethys	10			feeding	BB-1
1010	Bl. Storm Pet	2				
1010	O. Tethys	1				
1012						
1012	O. Tethys	3	o		2 Turtles copulating	BB-1
1020	O. Tethys	1	o			Hagf-1
1021	Br. Booby	1	o		adult	Hagf-2
1026	Tern sp	1				BB-2
1028	BL Tern	1				BB-2
1028	O. Tethys	1				
1030						
1330						
1331	Mag. Fing	1			Leave Obs.	557
1343	Birds	2			Resume Obs.	
1344	O. Tethys	1				
1347	Br. Booby	3				
1352	Pink Foot Sh	2				
1355	A. Mar. Sh	1	o		011/20	
1356	O. Tethys	1	o			



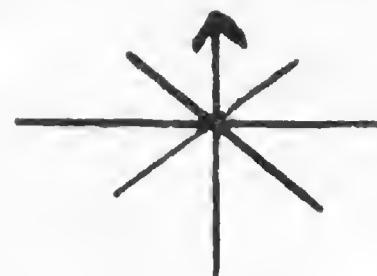
DATE 8 August 1967  
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
F 1400	Colom. Booby	200±25			90% adults rest? / immature	
↓	Wedge-tail	3			light phase - light edgings on back feathers	
1415	Black Tern	1			winter plumage	
	Can Noddy	40±10				
	Pink-foot	2			Feeding wheel st seen then	
	<del>Albatross</del> Manx	1			resting on H <sub>2</sub> O.	
1416	Sabine's Gull	1				
1423	O. tethys	2				
1428	frigate	1				
1429	O. tethys	4				
1435	<del>Albatross</del> Manx	2			Dark underwing - light white mottling	
	<del>Albatross</del> Slat				Engaged in courtship flight	
1520	Br. Booby	2				
1525	O. tethys	2				
1531	Br. Booby	2				
1536	<del>Albatross</del> Manx	2			joined other two	
1558	Whimbrel	2				
1608	Wedge-tail Sh	1				
S F 1625	O. tethys 2	12			light phase.	
1630					Scanning.	
1730					Care	
1733	Storm Pet	1			Resume	
1742	O. tethys	1				
1745	Sabine Gull	1				
1749	Wedge-tail	1			light phase.	
1753	Col. Booby	1			ad. ♂	
1801	Phalarope	3				
1810	Tropicbird	1			<del>Albatross</del> , on H <sub>2</sub> O.	
1825	Br. Booby	2				
1830					Care Observations	



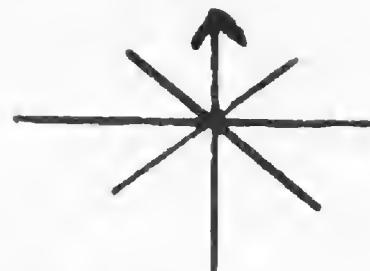
DATE 9 August 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0800					Begin obs. Overcast No land in sight	
0801	Shear-Pet	1				
0802	O. tethys	1				
0806	O. tethys	2				
0814	RBT-tropic	1				
0829	O. tethys	1			subadult.	
0839	Bird	1				
0925	O. tethys	4			following ship	
0930	R-BT-tropic	1			adult	
0932						
0935	O. tethys	2			Fish school (12" jumping) 50° sea No assoc. birds.	
0936	Wedgetail	1			following ship	
0957	Red Phalarop	1			Intermediate phase.	
1003	Br Booby	2			on H <sub>2</sub> O Winter Plumage	
1008	Br Booby	1			adult	
1008	O. tethys	1				
1033	O. tethys	1				
1050	Br Booby	2				
1052	O. tethys	6			following ship Total 12	
TF	1059	Whimbrel	5	E		
	1110	Bl-Face Booby	1		Immature	
	1115					
	1300				Same Observations.	
	1325	O. tethys	1		Resume	
MF	1333	O. tethys	10		Milling.	
	1345	R-Bil Tropic	1			
	1353	Br Booby	1			
	1410	Br Booby	1		adult female.	
	1415	Red-foot B	1			
	1443				<del>2. Pseudonora?</del>	
	1444	O. tethys	4		Imm. Turtle	
	1452	O. tethys	2		on H <sub>2</sub> O <del>copulated</del> <del>dark log</del>	
	1520	Puffins	2			
	1532	O. tethys	2		2 turtles copulating.	
	1549	O. tethys	4		in <del>log</del> log.	
	1629	Bl-Face Booby	2		(Same)	
	1630					
	1715				Resume	
	1720				Turtle (1)	
	1738	Bl Stamped	1		following ship	
	1750	Shear-Pet	1			
	1815	Wedgetail	1		light phase	
	1830				Same obs.	



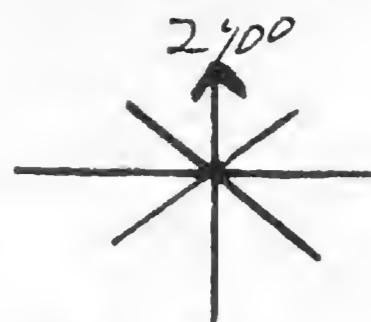
time	species	#	dir.	hgt.	remarks	loc.
0700					Begin	
0701	<del>A Manx Shearwater</del>	1				
0710	frigate	1				
0725	Bl-Fac Booby	1				
0728	<del>A Manx Shearwater</del>	2			Immature	
0729	Manx					
0729	Mag. Frigate	1			W. others following ship	
0745	<del>A Manx Shearwater</del>	1			adult male.	
0748	Manx					
0748	Bl-Fac Booby	2			W others until 0800	
0748	frigate	1			adult, granti? orange bill	
0749	tern	2				
0750	Red-F Booby	1			Immature	
0759						
0806	Shear Pet	1				
0808	B-Face Booby	1			30± S. griffmani	
TF 0817	Na Phalange	6	N		adult + <u>frank?</u>	
0818	Brown? Tern	1				
0825	Birds	3			15± S. griffmani	
0827						
0833	B-Face Booby	2				
0840	Phalange	2				
0848	B-Fac Booby	1				
0852	Phalange	3				
0853	frigate	1				
0853	B-F Booby	1			adult	
0857	Mag Frigate	1			adult male.	
0901	Br Booby	1				
TF 0903	Phalange	7	N		Immature	
0904	Phalange	4	N			
0913	Br Pelican	1				
TF 0915	Phalange	11	N			
0915	BL Storm Pet	1				
0920	Mag Frigate	2	O		adult female	
0924	frigate	4				
0934	Mag. Frigate	1			ad. ♂	
0940						
0943	Booby sp	1			Enter new water region <del>Br</del> Blue-Green	
0945	frigate	2				
1003	Mag Frigate	2			♂ & ♀	
1008	Can? Tern	1				
1011	Brown Tern	1				
1018	Willet	1				
1018	frigate	1				
1020	Br Pelican	3			adult + imm.	

300°



DATE 10 August 1967  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
TF 1031	Shorebird	7	NE			
1037	Mag Freg	1	S		ad ♂	
1038	frigate	4	S			
1043	Br-Face Booby	1			Imm	
1043	Br-Pelican	1			Imm	
1055	frigate	2	S			Plane - 7
1058	Mag Frigato	1			ad ♂	Mag Frigato
1100						
1400					Leave	
TF 1405	Br-Pelican	8	W		Bogis	
F 1419	Phalarope	7	S			
1423	frigate	4	S			
1425	Sooty Shear	1	S			
1430	R-f Booby	1			Imm on H20	
1439	Mag Frigate	1			adult male.	
1450	frigate	2	S			
1455	Mag Frigate	4			3 ♀ 1 subadult	
1456	frigate	3				
1510	Phalarope	3				Subad-8
1520	Br Booby	1				Booby 2
1530	Tern sp	2				
1540	Phalarope	3				
1545	frigate	1				
TF 1551	Shorebird	8	S	250'		
1558	Phalarope	3			on H20	
1608	Shorebird	1	S			
1615	BL-face Boob	1			Immature	
1620						
1628	Phalarope	3			20-55 S. - <i>leucoptera</i> incl young.	
1630	Booby sp	2			Immature	
1706+730						
1742	Tern sp	1	S		Immature	
1745	Mag Frigato	1			adult female.	
TF 1757	Phalarope	5	S			
	Nor					
1830					Leave.	



DATE 12 August 1967  
Pg. # 1

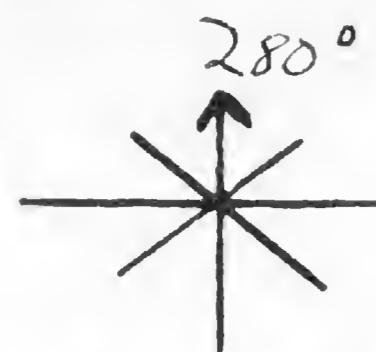
time	species	#	dir.	hgt.	remarks	loc.
1500					Begin	
1505	Br. Booby	1			Imm	
1510	Br. Booby	1			Imm	
1515	Br. Booby	1			Imm	
1515						
1527	Phalarope	3			35±5 S. gaff piani some young	
1527	Tern	1			following shift for 3 min	
1535	Mag. Frigate	1			ad ♀	
1540	Br. Booby	2			adult	BB-57
1543	Br. Booby	1			imm	BB-8
1547	Br. Booby	2			immature	98
1553	Br. Booby	2			adult	BB-2
1605	Br. Booby	2			adult	BB-1
1605	Teal Black	2			winter plumage	BB-134
1608	BL Tern	2			Breeding plumage	
1610	Br. Booby	2			adult	BB-3
1615	Br. Booby	2			adult	BB-80
TF	1615	Phalarope	5	0		
1620	Brown Booby	3			adult	
1628	Frigate	1			subadult	
1635	Br. Booby	1			Immature	BB-1
1640	Br. Booby	2				BB-1
1654	Tern	1				BB-2
1654	Frigate	2	0			BB-284
1700					Care.	
1730					Imm	
FF	1740	BL Tern	20±2		feeding	
		<del>Antarctic Sh</del>	10±2			
FF	1750	Manx	12			
		Brown Boob	12			
FF	1805	BL Tern	40±5		Some feeding	
		Br. Booby	15±2		adult	
		Manx Shear	20±5			
		BL Tern	40±5			
FF	1815	Manx Shear	1		feeding	
		Brown Boob	25±5			
FF	1820	Br. Booby	8			
		BL Tern	30±5			
		Manx Shear	25±5			
1822	North Phalarope	2			Care	1
1830						

1500 - 15°58' 95°20'

1700 - 15°50'N 95°10'

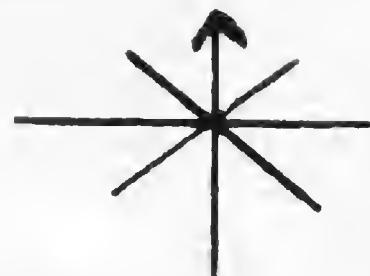
1800 -





DATE 13 August 1964  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0730					Begin	
0732	Phalarope	3	S			Phala- 11
0733	Phalarope	2	S			Manx 33
0734	Manx Shear	1				
TF 0736	Shearbird	10	S		not Phala.	Shear- 10
0738	Sabine's Gull	1	S			Sabine- 2
MF 0740	Manx Shear	1				
0745	Br. Booby	7			juven	Booby- 11
0747	Br. Booby	3	S		1 Ad 2 imm	Bo- 12
0748	Manx Shear	2	S			
0749	BL Tern	2			winter plum.	BLT- 4
0755	BL Tern	2			winter plumage. on log.	BLT- 13
0759	Br. Booby	2				
0803	Manx Shear	4	S			BL SP- 2
0803	North Phala	1	S			Com Tern- 1
0809	Manx Shear	4				BFB- 2
0810	BL Storm Pet	1			feeding	
0812	Br. Booby	1			Sitting on H20 - resting under	
	Manx Shear	1			Booby- 5	
0815	Com? Tern	1				
0817	Sabine's Gull	1	S			106
0818	BL Storm Pet	1				
0833	Manx Shear	2				
FF 0839	Na Phalarope	12				
TF 0840	Phalarope	5	S		- on H20 Feeding	
0845	Manx Shear	1			Near floating debris	
0847	Phalarope	1				
0900					stop	
0903	BL-faced Booby	1			adult orange bill	
0904	Br. Booby	1			immature	
0921	Manx Shear	1				
0929	Red-foot Shear	1				
0929	Br. Booby	1				
0930		4				
1300					subadult	
TF 1301	Manx Shear	6			Leave.	
1305	Manx Shear	1			Remain	
MF 1307	Booby	5			Milling	
1317	Manx Shear	1			Milling	
1318	Red-f Booby	1			on H20	
FF 1320	Manx Shear	8			feeding	
1322	Red-f Booby	2				
1323	BL-faced Booby	1				
1325	Br. Booby	1			adult	

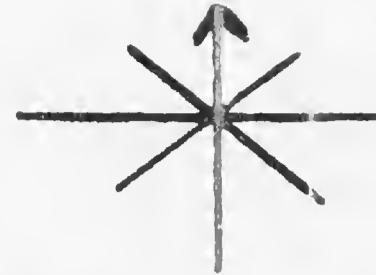


DATE 13 August 1967  
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
FF	1325						
	1327						
	1329	Tern	3				
		Bl. face Booby	2				
		Brown Booby	5				
		R-f Booby	5				
		Booby sp	10				
		Br Booby	7				
		Manx Shear	12				
		Manx Shear	1				
F	1335					on + 20 remnants of FF.	
	1341						Term - 3
	1342						BB - 6
	1344	Manx Shear	3				BB - 49
	1344	R-f Booby	2				BB - 15
	1345	BL Tern	3			feeding	BB - 10
	1345	Bl. face Booby	1				Manx - 18
	1350	BL Tern	1				BL Tern - 40
	1351	Phalarope	2				North - 4
TF	1355	Red-f Booby	5	W			BB SP - 2
	1355	BL Storm Pet	1				Skua - 1
	1402	Shear	1				Phal - 9
	1403	BL Tern	2				Skua - 1
TF	1415	Phalarope	7	E			BB SP - 1
	1416	Manx Shear	1				158
F	1419	Br Booby	20			ad legs	
		Bl. face Booby	3				
	1425	Salmon 'n bull'	1	S			
	1450	Phalarope	2	S			
	1450	Manx Shear	1				
	1500					Leave.	
	1730					Remove	
FF	1731	Br Booby	12			feeding	
		BL Tern	30			on ad legs	
	1733	Br Booby	1				
	1735	Br Booby	1				
	1736	BL Tern	4			ad on leg	
	1737	Br Booby	3				
		Redt Booby	1				
	1740	Na Phalarope	2				
	1745	R-f Booby	2				
	1746	BL Storm Pet	1				

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SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E



DATE 13 August 1967  
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
1755	Para. Jaeger	2				
	BL Tern	2			Flight plane sharing time	
1756	Phalarope	2				
1800	Br Booby	2				
1801	Comn? Tern	2			on log Adt Tma	Para - 2
1801	Red-f Booby	2				BLT - 2
1830					6 are.	Phal - 2
						BB - 2
						ComT - 2
						AFB - 2
						12

0700- 15° 53' N 98° 12' W

0800- 15° 57' N 98° 23' W

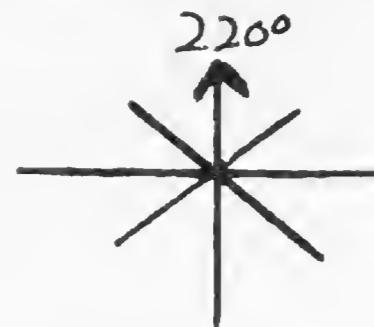
1200- 16° 03' N 98° 40' W

1400- 16° 14' N 98° 59' W

1500-

1600- 16° 24' N 98° 18' W

1700-



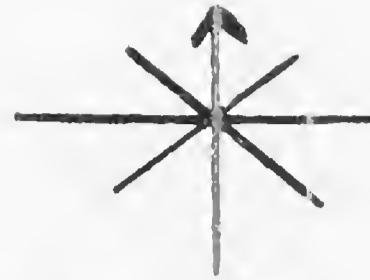
DATE 16 August 1967  
Pg. # 1

Acrop To 100°N

time	species	#	dir.	hgt.	remarks	loc.
1030					Begin	
1040	Red-f. Booby	1			on log	Many - 7
1040	Bl. Tern	2			on log	RFB - 1
1040	Manx Shear	1				
1045	Bl. Tern	2				Bl Tern - 13
1055	Brown? Tern	4				Brown - 1
SF 1108	Bl Tern	8			Milling.	Booby - 1
1127	Booby	1			n Turtle	Booby - 1
1119	Manx Shear	1				Booby - 1
	Townsend's Pet					
1124	Bl Tern	1				
1124	Sabine's Gull	1	S		Considerably smaller than <i>P. jessiae</i> , possibly <i>auricularis</i> ?	Sabine - 2
1150		1	S		Breeding plumage	
1157	Sabine's Gull	1			Breeding plumage	
TF 1208	Shorebird	7			2 Turtle.	Shore - 7
1208	Manx Shear	1			on H2O.	DB - 9
1221	Manx Shear	1				Booby - 1
1236	Br Booby	1			adult	
1236	Oceanodroma	1				tern - 3
1237					One Turtle	
TF 1238	tern sp	3				Phalacro - 18
1245	Phalarope	5	S			
1245	Br Booby	3				North - 9
1245	Phalarope	1				3 - P - 1
1250	North. Phalarope	1				
1255	North Phalarope	2				juv - 1
1256	North Phalarope	4				
1259	North Phalarope	3				
F 1302	Phalarope	8			One turtle prob.	78
1305	Phalarope	2			on H2O prob feeding	
1305					Turtle ①	
1315	Shear. Pet	1				
1320	Br Booby	2				
1324	Manx Shear	1				
1337	Br Booby	1			Immature	4-30
1342					2 Turtle	1-36
1346	Jaeger sp	1				
1349	Manx Shear	1				
1356						5-66
1406	Br Booby	1			2 Turtle	
1408					adult	
1408	Phalarope	1			Turtle	
1415	Br Booby	1			or white head.	

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SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG — E

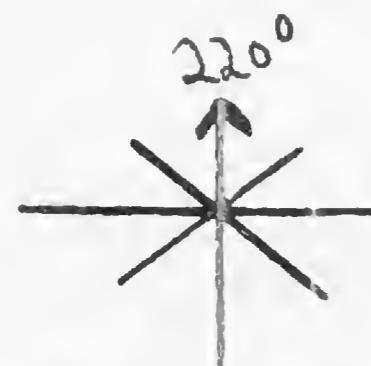


DATE 16 August 1967  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1405					Turtle (1)	
1425	Red-F Booby	1			subadult	
1434					Turtle (1)	
1440	Booby	1			on <del>the</del> Turtle (new one)	RF B - 2
1441					Turtle 6"	
1443					Turtle 20"	
1443	Phalarope	2				Phala - 19
1451	Phalarope	1				BB - 19
1451	Br Booby	1				Br - 1
1451					One Delphinid seen only briefly	Ocean - 1
1453					Turtle (1)	
1455	Phalarope	4				North - 8
1500					Stop for Station (ease Obs)	
1730					Resume Obs still on STATION.	May 2
1737	Booby	1				BB (P-1)
1746	Phalarope	2				Stop - 1
1753	jaeger sp	1				
1758	Phalarope	2				18
1807	Oceanodroma	1				
1813	Br Booby	1				
RF 1840	North Phala.	8			adult.	
TF 1842	Br Booby	8	E		feeding	
1850					Underway again	
1851	Manx Shear	1				
1855	R-Foot Boob	1				
1856	Bl Storm Pet	1				
1859	Storm Petrel	1				
1900	Br Booby	3				
1902	Manx Shear	1				
1904	Br Booby	3				
1906	Br Booby	3				
					Sunset Obs.	

2 3 4  
5 6 7

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SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG — E

DATE 17 August 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0630					<u>S. Begin Obs. On Station.</u> <u>Same Station</u>	
0635	Red-f Booby	3			All RFB are imm → Subadult.	
0637	Red-f Booby	2				
0644	Red-f Booby	1				
0645	Kern. Pet	1				
0646	Wedgetail	2				
0647	Manx Shear.	1				
0648	Red-f Booby	4			prob. <u>auricularis</u>	
0655	Red-f Booby	3				
0708	Manx Shear.	1				
0717	Jaeger sp	1				
0753					Underway.	
0813	Manx Shear	2				
0814	Kern Pet	1			dark	
0815	Phalarope	1				
0815	Bird	1				
0822	Phalarope	2	S			
0823	Kern Pet	1			dark	
0826	Phalarope	1	S			
0833	Phalarope	2	S			
0834	R-f Booby	1				
0835	Phalarope	1			Imm.	
0913	Manx Shear	1				
0917	Bl-face Boob	1			Ad orange bill	
0919	Manx Shear	1				
0926	Red-f Booby	1				
0927	Shear-Pet	1				
0934	R-Bill Tropic	1				
0947	Shear Pet	1				
0955	Jaeger	1				
0955	R-Foot Booby	1				
0956	R-Foot B	3				
0957	Wedgetail	2			Right	
1000						
1145	<del>Red-f Booby</del>				It goes for station.	
1155	<del>Red-f Booby</del>	3			Resume watch - The group of RFB is again	
1215	<del>Red-f Booby</del>				present assume to be same as on 17 August	
1215	Phalarope	1			Start Nesting Tow 5 Kts	
1218	<del>Red-f Booby</del>	1				

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SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

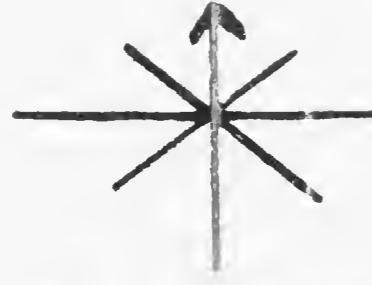


DATE 17 August 1967  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1237	Bl-face Booby	1			I mm	
1245	Empidonax	1			Randed on ship collected	
1257	Bl-face Booby	2			adult.	
1300	Phalarope	1				BFB-1
1310	<del>Bl-face</del> Type	2				Crepid-1
1313	<del>Bl-face</del> T	1				POal-2
1318	Bl-face Booby	1			1st year. BrSA	
1323	Phalarope	1			Under Way.	Localt 18
1323	Oceanodroma	4				
	leucomelas?					
1336	Leach's SP	1			Bl line seen.	Localt 2
1339	Manx Shear	3				Manx-7
1343	Leach's S.P.	1				1-2
1348	Br Booby	1				Watty 14
SF	1401	Leach's Type	5			
	1401	Br Booby	1		I mm.	8.60 1
F	1406	Leach's Type	3			3- P 1
	1416	Nor Phala.	14		on H <sub>2</sub> O	Manx-3
F	1435	Red-bill Tropic	1		on H <sub>2</sub> O	
	1436	Phalarope	1			
	1444	Shear-Pet	1			Tropic-1
	1445	Leach's Type	2			Br 4
	1502	Manx Sh	1			Adl 1
	1502	Leach's Type	2			Adl 2
	1503	Pom Jaeger	1			3F P 1
	1510	Tropic bird	1			
	1517	P. c. extrema	1			
	1520	Phalarope	1			
F	1525	RFB	1			
	↓ 30	JF Petrel	1552			79
		Manx Shear	3		Some feeding, fish jumping	
		Pom Jaeger	2		Right	
	1532				Front	
	1535	P. c. extrema	3			
	1545				5 t. p. for station	
	1715				Resume obs on STA.	
	1717	R-F Booby	1		subadult	

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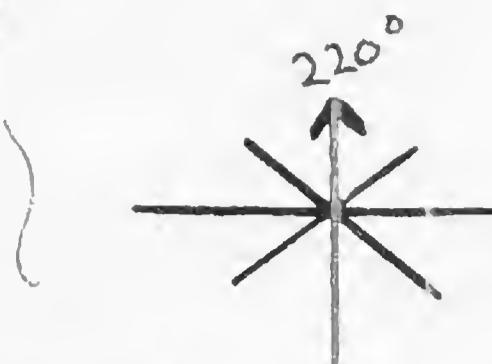
SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E



DATE 17 August 1967  
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
1735	Br Booby	2			adult	
1743	J F Petrel	1				BB-2
1744	Phalarope	1				JF-4
TF 1752	Bl-Face Booby	5	SE		Imm	BB-1
1803	Jaeger	3	S		Underway.	Bl-1
1810	J F Petrel	3	O			BFB-5
1836	Tern Pet	1				Ja-7
1836	P. cterata	2			Intermediate	RP-2
1838	Manx Shear	1				Pe-2
1838	Shear-Pet	2				May-4
1845	Manx Shear	1				g-P-6
1850	Shear-Pet	4				WIS-2
1851	Tern Pet	1				
1851	Wedgetail	1			dark.	
1856	Wedgetail	1			dark	
1856	Jaeger	4			light	35
1903	Manx Shear	2				
1908						
						Sunset

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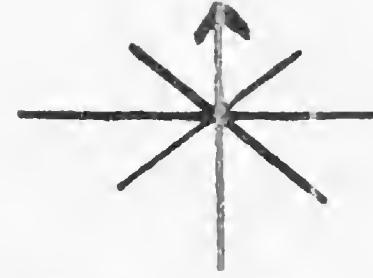
SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

DATE 18 August 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0600						
0645	JF Petrel	1				
0646	P. externa	4				
0647	P. externa	3				
0652	Petrelina	4				
0653	Shear-Pet	2				
0654	Jaeger	1				
0657	Wedge-tail	1				
MF 0710	P. externa	12				
F 0718	JF Petrel	5			on H <sub>2</sub> O	
0718	Wedge-tail Sh	2			dark.	
0732	JF Petrel	4				
0738	P. externa	2				
0745	P. externa	3			on H <sub>2</sub> O.	
0759	P. externa	2				
F 0805	P. externa	7				
F 0818	P. externa	6			on H <sub>2</sub> O.	
F 0819	P. externa	8			on H <sub>2</sub> O	
SF 0830	JF Petrel	65±5				
	Wedge-tail	5				
0831	Leach's Type	1			dark	
F 0838	P. externa	15±3			on H <sub>2</sub> O	
0838	Phalarope	4			on H <sub>2</sub> O.	
F 0848	P. externa	8			on H <sub>2</sub> O	
0852	R. Bill Tropic	1				
F 0855	P. externa	11				
F 0858	<del>Wedge-tail</del>	35±5			on H <sub>2</sub> O	
F 0859	P. externa	6			possibly <del>on H<sub>2</sub>O</del> Dark Pha.	
0915	Tropicbird	1			on H <sub>2</sub> O	
0934	Leach's Type	1				
0935	P. externa	1				
SF 0943	P. externa	6			Milling.	
0943	Phalarope	3				
0952	Shear-Pet	2				
0954	JF Petrel	2			one had squid in bill.	
0958	Wedge-tail	1			dark	
0959	Red Phala.	1				
1003	P. externa	1				
1006	JF Petrel	1			on H <sub>2</sub> O	
1020	Leach's	1				

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SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

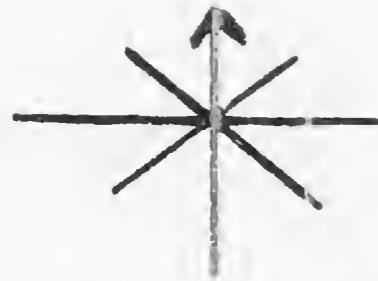


DATE 18 August 1967  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1020	R-Bill Tropic	1				
1025	Petrel	2			on H2O	
1025	Leach's Type	2				
1029	Bl-F Boobys	2				
1030		1			down	
1145					Stop Game Obs. Noon sta	
1153	JF Petrel	3	○		Resume.	
1203	Leach's Type	1	○			
1212	Wedge-tail Sh	2			dark phase.	
1215					Underway.	
F 1233	JF Petrel	5				
1255	JF Petrel	2			on H2O	
1257	Wedge-tail	1			DARK	
1303	Leach's Type	2				
1308	Wedge-tail	1			dark	
1308	JF Petrel	1				
1317	Wedge-tail	1			dark	
1320	Leach's Type	1				
1326	JF Petrel	1				
1330	Wedge-tail	4			dark	
1340	Wedge-tail	2			dark	
1345					10 Riso's? Dolphins 1st seen barely	
1350	Leach's Type	1			Breaking surface Only white water seen. When some	
1353	Phalarope	1			distance away breaking surface seemed to push	
1400	Leach's sp	1			dark rump. up with blunt snout pushing	
1413	Wedge-tail	3			H2O over head then down. Head	
1416	Oceanodroma	1			may have been white but too far to see	
SF 1420	Wedge-tail Sh	5			Could have been H2O. High d. f.	
1422	JF Petrel	2	○			
1429	MAN Shear	1				
1433	JF Petrel	1				
F 1437	Wedge-tail	5			dark & no feeding	
	J. externa	6				
1440	O. Tethys?	1				
1447	J. externa	6			Scanning	
SF	Wedge-tail	3			dark	

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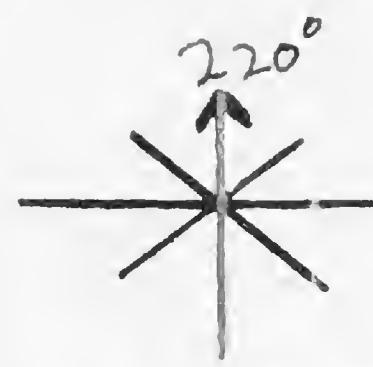
SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E



DATE 18 August 1967  
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
F 1448	Wedge-tail	5			dark on H2O	
H#	Yankee She	1				
SF 1450	JF Petrel	6				073-15
1510	JF Petrel	1				PPR-2
1522	Storm Petrel	2				May-1
1527	Wedge-tail	1			dark	18F-27
1530	JF Petrel	1				Storm-4
1533	Wedge-tail	1			dark	PPR-26
1536	Pexterna	3				LT-3
1541	JF Petrel	2				BTG-1
F 1541	Leach's Type	1				PLG-1
1545	Phalarope	1				RPE-3
1548	P. externa	12			on H2O	REF-1
1548	Bl-f Booby	1			down.	84
1548	Wedge-tail	2			dark	
1554	Red Phala	3				
1554	JF Petrel	1				
1555	Wedge-tail	1			Dark.	
1559	Leach's Type	1				
1600					Stop	
1715					Resume 055 still in station.	
1720	P. externa	1				
1725	P. externa	1				
1732	P. externa	1				
1736	P. externa	3				
1736	P. externa	1				
1736	Red F Booby	1				
1737	Storm Petrel	1			1st year.	
SF 1740	JF Petrel	13				
	Wedge-tail	5			Searching.	
1800					dark	
1803	P. externa	3			Underway	
1816	Storm Petrel	1				
1825	P. externa	1				
1830	P. externa	1				
1834	Leach's Type	1				
1837	JF Petrel	2				
1846	JF Petrel	1				
1903	PI Petrel	2			appeared black.	
1910					sunrise	

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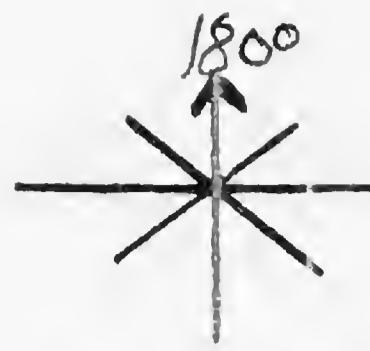


SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

DATE 19 August 1967  
Pg. # 1

time	species	#	dix.	hgt.	remarks	loc.
0700					Bojen 05	
0703	P. exotica	1				
0703	Shear Pet	1				
0708	Many Shear	1				
0708	P. exotica	2				
	Wedgetail	1				
0709	Wedgetail	1			dark	
0712	JF Petrel	3				
SF 0715	Petrelina	5				
F 0718	Wedgetail	8			on H <sub>2</sub> O Dark.	
SF 0725	Petrelina	20±5				
0726	P. exotica	3				
0730	Wedgetail	1			dark	
SF 0730	Petrelina	10				
0735	Leach's sp	1				
0735	JF Petrel	3			DARK Rump	
0742	Petrelina	3				
0743	P. exotica	3				
F 0749	P. exotica	2				
0749	WedgeTail	15±3			distant over fish 10's of small ones out of H <sub>2</sub> O	
0750	Petrelina	4			DARK didn't appear to be feeding	
0751	P. exotica	4				
0752	JF Petrel	7				
0754	Phalarope	2	5			
0755					C/c 180°	
SF 0758	Wedgetail	5			dark.	
	Petrelina	25±5				
0802	Wedgetail	1			light	
0803	P. exotica	4				
0804	P. exotica	4				
0804	O. Tethys	1				
MF 0809	Petrelina	12				
0809	Wedgetail	2			dark.	
F 0812	Wedgetail	11			dark on H <sub>2</sub> O	
0815	Wedgetail	3			on H <sub>2</sub> O Dark	
0823	P. exotica	2				
0825	O. Tethys	1				
0827	Br. Booby	1			Imm	
0838	Wedgetail	1			dark	
0839	P. exotica	1				

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SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

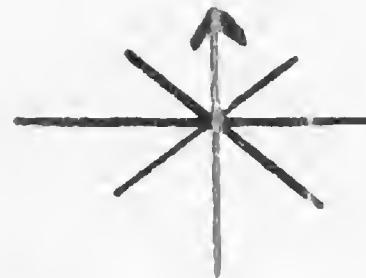
DATE 19 August 1967  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
0840					Enter Rain	
0856	JF Petrel	2				
0905					Leave Rain	
0913	Wedge-tail	1			dark.	
0916	Manx Sh	1				
0925	P. externa	1				
0928	Wedge-tail	2			dark	
0929	Wedge-tail	4			Dark on H2O.	
0937	O. tethys	1				
0945	O. tethys	2			Close view No black line very large broad white patch	
	<del>Leach's SP</del>	1			<del>Leach's SP</del>	
0946	JF Petrel	1				
1005	JF Petrel	2				
1008	Wedge-tail	4			on H2O feeding Dark	
1012	JF Petrel	2				
1025	P. externa	1				
1026	P. ex. T. albifrons	1				
1028	O. tethys	4			following ship	
1030					Stop for station	
1115					Resume obs	
1202	O. Tethys	1				
1209						
1212	Wedge-tail	1			Underway.	
1217	JF Petrel	2			dark	
1233	P. externa	1				
1234	Red Phalarope	2				
1243	Red Phalarope	4				
1253	O. tethys	2				
1307	Wedge-tail	1			dark.	
	Manx Sh	1				
1313	Wedge-tail	1			dark.	
1407	Oceanodroma	1				
1413	Shear Pet	1				
1419	JF Petrel	1				
1421	Manx Shear	1				
1429	Wedge-tail	1				
1430	Red Phalarope	1				
1431	Shear Pet	2			Right	

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SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

DATE 19 August 1967  
Pg. # 3



time	species	#	dir.	hgt.	remarks	loc.
1443	Oceanodroma	1				
1443	WedgeTail Sh	1			Right	
1444	J F Petrel	1				
1449	P. exsima	1				
1449	Wedgetail	1			Dark	
1458	J F Petrel	3				
1458	O. tethys	1				
1502	Shear Pet	4				
1503	J F Petrel	2			ant 420	
1503	Sooty Shear	1				
1503	O. tethys	1			white under	
1507	J F Petrel	2				
1510	J F Petrel	2				
1510	Wedgetail	1			Dark	
1515	O. tethys	1				
1528	<del>Leach's SP</del>	1			<del>Leach's Petrel</del>	
1529	Brn Shear SP	1				
1535	Oceanodroma	1				
1535	WedgeTail Sh	1			dark	
1540	J F Petrel	1				
1558	Wedgetail	1			Dark	
1559	J F Petrel	1				
1600					Stormy weather	
1725						
1725	J F Petrel	1			Resume Obs	
1730	Wedgetail	1			dark.	
1808						
F 1828	P. exsima	2042			Underway	
	Wedgetail	4			dark	Very little feeding, Fish yanking at surface.
1840	BL Storm Pet	1				
1849	P. exsima	1				
1850	J F Petrel	2				
1903	BL Storm P	2				
T904	Leach's SP	1			Size diff seen	
14	O. tethys	1				
1908	J F Petrel	2				
1908	Wedgetail	2			dark.	
1916						Sunset

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SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

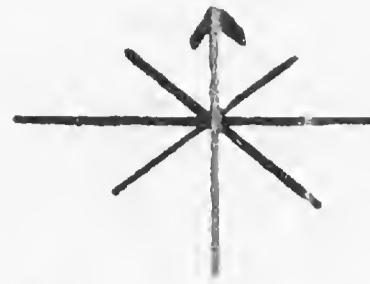
**DATE** 20 August 1967  
**Pg. #** 1

time	species	#	dir.	hgt.	remarks	loc.
0651					Sunrise	
0710	JF Petrel	2				
0710	<del>0651</del> JF Petrel	1				
0710	Wedgetail	1			dark	
F 0722	Wedgetail	10			Dark H2O	
0728	Pexterna	5				
0728	JF Petrel	2				
0730	Phalarope	1				
0730	P. externa	1				
0743	P. externa	3				
0753	Bl Storm Pet	1				
0757	Phalarope	2			feeding	
0804	Kern Pet	1			outer place	
0805						
0816	Wedgetail	1				
0817	Pexterna	2				
0825	Audubon? Th	1				
0827	JF Petrel	2			Dark for food	
0837	Pexterna	2				
0838	JF Petrel	4				
0838	Wedgetail	3			dark	
0842	Storm Pet	1				
0846	Tern sp.	1				
0850	O. Tettrys	1				
0903	Kern Pet	1				
0905	Bind	1			Dark.	
0910	Heavis sp	1				
0942	JF Petrel	2			BL line seen	
0943	Phalarope	1				
0952	Storm Pet	3			feeding	
F 0955	JF Petrel	1				
0958	JF Petrel	1				
0959	P. externa	6			on H2O	
0959		4			on H2O	
1018	Wedgetail	4				
F 1020	Wedgetail	12			dark	
	JF Petrel	7				
1030	P. externa	4			on H2O	
P 1030	Wedgetail	8			on H2O	
1030						
SF 1040	Wedgetail	5			Dark some damp on H2O	
	Shear Pet	10				
					dark	
					Searching	

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SMITHSONIAN INSTITUTION  
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AT SEA DAILY LOG — E

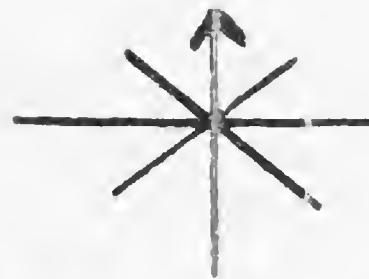
DATE 20 August 1967  
Pg. # 2



time	species	#	dir.	hgt.	remarks	loc.
1042	Wedgetail	1			light	
1050					Stop	
1145						
1155	JF Petrel	1			Resume watch station	
1200	Storm Pet	4				
1225					Underway 170°	
1257	PI? Petrel	1				
1303	P. externa	1				
1308	JF Petrel	3				
1353	Shear. Pet	2				
1400	JF Petrel	1				
1418	P. externa	1				
1428	Kerm Petrel	1			Dark.	
1430	JF Petrel	1				
1439	JF Petrel	1				
1454	P. externa	1				
1538	Headi's Type	1				
1544	P. externa	1				
1552	P. externa	1				
1553	Scarlet Pet	1				
1600					Stop for Station nos.	
1715					Resume Watch	
1720	O. Tettrys	1				
1752					Underway 180°	
1805	P. externa	1				
1812	JF Petrel	2				
1841	Wedgetail	1			dark	
1844	JF Petrel	1				
	O. Tettrys	2			on H <sub>2</sub> O	
1853	Bl.-faced Booby	1				
1855	JF Petrel	1			Imm	
F 1859	JF Petrel	2				
	Wedgetail	3			on H <sub>2</sub> O.	
					DARK	
1916					Sunset	

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AT SEA DAILY LOG -- E

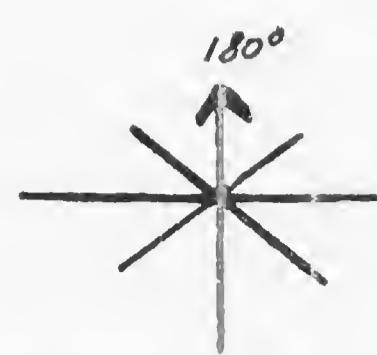


DATE 21 August 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0654					Sunrise	
0710	Shear-Pet	1				
0713	JF Petrel	1				
0722	Wedgetail	1			Right	
0725	JF Petrel	3				S-P-1
0730	JF Petrel	2				JFP-30
0733	Wedgetail	1			Dark	WPS-17
0744	JF Petrel	2				Per-201
0752	Wedgetail	1			Dark	ST-4
SP	JF Petrel	6				
	P. externa	4				
	JF Petrel	1				
	P. externa	2				
	P. externa	3				
	P. externa	108±25				
SF	Sooty Tern	4				
	Wedgetail	3			dark	Per-2
	Wedgetail	1			dark	Per-2
	P. externa	4				
	P. c. Tern	3				
	P. c. Tern	1				
	Pterodroma				<del>probably</del>	
	<sup>nigripennis</sup>					
	JF Petrel	3				W-W P-1
	JF Petrel	1				263
F	JF Petrel	1			Squid in bill	
	JF Petrel	2				
	Wedgetail	1			dark.	
	Wedgetail	1			dark	
	JF Petrel	2				
	JF Petrel	2				
	Kern Pet	1			dark	
	frigate	2				
	P. externa	85±10			Very little feeding	
	Wedgetail	10				
	JF Petrel	3			dark	
	Phalarope	1				
	JF Petrel	2				
	Kern Pet	1			dark	
	JF Petrel	2				
	W-wing Pet	1			<del>probably</del>	

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SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

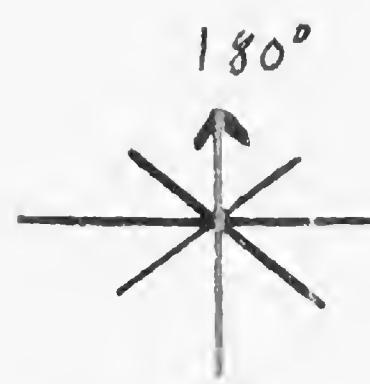


DATE 21 August 1967  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1145					Resume Obs.	
1150	JF Petrel	4				
1155	JF Petrel	3				
1156	Wedge-tail	1			Dark	
1203	Bl-wing Pet	1				
1232					Underway 190°	
1240	JF Petrel	3				
1255	Wedge-tail	1			Dark.	
1313	JF Petrel	3				
1316	<del>Andulon?</del> Shear	1				
1322	Kerm Pet	1			Dark	
1338	<del>JF Petrel</del> Petrel	1				
1338	Kerm Pet	1			Dark	
S F 1448	Frigate	4			Dark and <del>overcast</del>	
	Shear-Pet	15				
1414	Br Booby	1			Imm	
1415	JF Petrel	2				
F 1428	Frigate	2			Some feeding	
	Pexterna	50±5				
	Shear Pet	20±5				
1435	O. Tethys	1				
FF 1504	Mag Fins	1			adot	
	P. externa	15±3			some feeding	
1520	JF Petrel	2				
1521	Wedge-tail	1			light	
1539	Frigate	2				
1550	JF Petrel	1				
1551	JF Petrel	3				
1600					Stop for rotation	
1730					Resume obs	
S F 1755	Frigate	?				
	Pexterna	15±3				
1808					Underway 185°	
1840	Bl-wing Pet	1				
1845	JF Petrel	2				
1850	W-wing Pet	1				
1914					Feeding. Flew down to the pick up FF, flew off, landed again Sunset wings out, then flew off.	

195  
281  
426  
363  
162  
425

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7-28-64



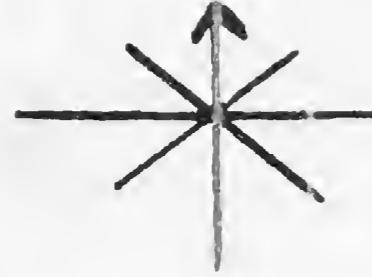
SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

DATE 22 Aug, 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0656						
0712	Pterodroma	1			Sunrise	
0723	Leach's Type	1			feeding	
0728	Red Phalange	3			Kicking on surface	
0733	Leach's Type	1			on H <sub>2</sub> O	
0738	W-wing, Pet	1				
0755	Sooty Tern	1				
0800	frigate	1			2nd year bird speckling around throat.	
0801					STOP	
0807	Pterodroma	1				
0808	Storm Petrel	1				
0825	W-wing				Underway	
0830	<del>W-wing</del> Pet	4				
0832	<del>W-wing</del> Pet	1				
0848	Leach's Type	2				
0848	B. S. T. & P. Type	1				
0849	Storm Pet	1				
0855	Kern Pet	1			Dark	
0856	Leach's Type	1				
0903	W-wing, Pet	1				
0903	W-wing, Pet	3				
SF	Sooty Tern	4				
	Shear Pet	1052			Scanning	
0930	Storm Pet	1				
0932	W-wing Pet	1				
0939	W-wing Pet	1				
1018	W-wing Pet	1				
1029	Shear. Pet	1				
1036	W-wing Pet	1				
1036	Frigate	2				
1045					feeding.	
1215					Stop for station & obs	
1220					Resume Obs	
1300	frigate	1			Nebelmont 5 KTS	
1317					Underway.	
1430-45					5 Tops	
1455	Pterodroma	1				
1510	Leach's Type	1				
1520	W-wing Pet	1				
1554	W-wing Pet	1				
1600						
1715						
1850	Gann. S. ate	1			STOP	
1910					Resume obs Underway at 180° AO to sunset	

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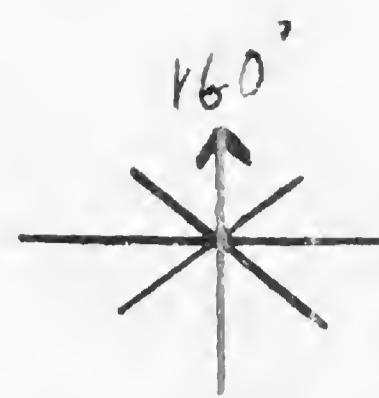
SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E



DATE 23 August 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0657					Sunrise	
0705	R-Tail Tropic	1			Down.	
0815					ST op	
0816	Frigate spz	1				
0832					Underway. 155°	
1044	P. Lencore	1				
1045					Stop for station	
1200					Resume obs.	
1211	<del>Shore Pet</del> Wedge Tail	1			light	
1312	Phalarope	1				
1315					NEK Tontow 5/RTs	
1409					underway	
1413	Phalarope	1				
1428	W-wing Pet	1				
1431	Shorebird	1				
1440	Collared Pet	1				
1540					2015 Sternella sp heading 12° E	
1542	Wh-face				One <del>bat</del> Piled Whale B. A. antarctica	
1550	<del>ASp</del>	1			<del>Family</del> Now with <del>one</del> <del>bat</del> kicking vigorously off <del>the</del>	
1552	<del>ASp</del>	1			<del>the</del> <del>one</del> <del>bat</del> was about <del>one</del> <del>bat</del> dark part.	
1600	<del>ASp</del> Kerm Pet				Dark.	
1715					Stop for station.	
1803	Oceanodroma	1			Resume obs.	
1909					Sunrise Green Flash	

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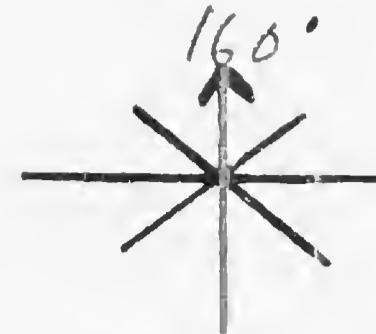


SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG — E

DATE 24 August 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0659						
0815-32					sunrise stop	
0855	Ocean. Tropic	1				
0857	<del>W-Face</del> SP	1			feeding	
0912	<del>Prongdr.</del> SP	1				
0930	Oceanodroma	1				
0933	Ocean. SP	1				
0942	Ocean. SP	1				
1003	Ocean. SP	1				
1008	W-Faced SP	1				
1045					Stop for Station + Obs	
1145					Resume Obs.	
1230						
1255	Storm Petrel	1				
1325	Oceanodromo	1				
1328	Leach's SP	1				
1335	Leach's Type	1				
1376	Leach's Type	4				
S F	Leach's Type	6				
1415	Leach's Type	6				
1430					STOP	
1440	Leach's Type	1				
1445					Underway	
1512	Leach's SP	1				
1514	Leach's Type	2				
1600						
1715					Leave Obs Stop for Station	
1733	Audubon's Shear	1				
1755					Resume Obs	
1800						
1843					Underway	
1844	Collared Pet.	1			2055 Delpside	
1900	O. markhami?	1				
1906					One Sperm Whale	
					Sunset	

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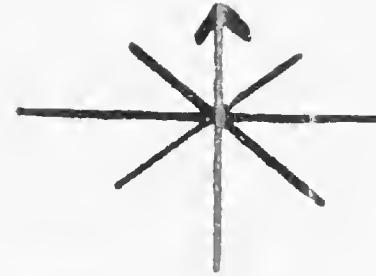
SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG — E

DATE 25 August 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0702					Sunrise	
0713	Oceanodroma	1				
0715	Leach's SP	1			Bl line seen	160° 1
0730	Oceanodroma	1				160° 1
0732	Leach's Type	1				160° 15
0737	Leach's Type	1				Leach's 4
0756	Leach's Type	1				L Type - 3
0800					Sperm? Whale	160° 1
0810	Pterodroma	1				160° 1
0815					Stop	Marlin - 1
0818	O. markhami?	1				160° 3
0830	Oceanodroma	3				160° 3
0832	O. Tolly	1				160° 3
0833					Underway 180°	160° 2
0850					3 Whales sperm	Collard - 2
0853	P. leucoptera	1				
0912	W-Faced SP	1			Dark Pump - Some decking off. Rapid stiff wing beats	
0915						
0927	Collard Pet	1			8 Sperm Whale in area all yowling	36
0927	Oceanodroma	1				
0957	P. leucoptera	1				
1015	Oceanodroma	1				
1024	W-Faced SP	1				
1025	Oceanodroma	1				
1030	O. Tolly	1				
1030	Oceanodroma	1				
1035	Oceanodroma	1				
1040	Collard Pet	1				
1041	P. leucoptera	1				
1044	Oceanodroma	1				
1044	W-faced SP	1				
1045					Stop for Station	
1054	Leach's SP	1				
1055	O. crassirostris	1				
1102					Caribbs	
1200					Reunions	
1207	Leach's SP	2			Nelsons	
1255	Phalarope	1				
1303	Oceanodroma	2				
1328					Underway 190	
1343	Oceanodroma	1				
1345	Oceanodroma	1				

SI-MNH-958e  
7-28-64

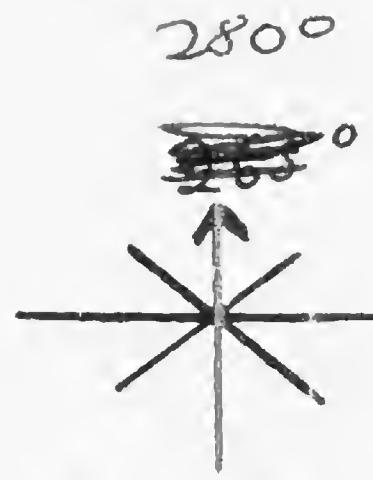
SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E



DATE 25 August 1967  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1426	Oceanodroma	1				
1430	Y5	1			Stop	
1512	Leach's Type	2				
1526	Leach's SP	1			Bl line green	
1600					STOP for Station 1063	
1615					Resume obs	
1736	Oceanodroma	1				
1800	O. Tethys	1				
1806					Underway 190°	Ocean - 5
1824	Leach's SP	1				LT - 3
1826	Oceanodroma	1				
1833	Oceanod.	1				
1836	Leach's Type	1				
1836	P. longif. a	1				
1848	P. longif. a	1				
1851						
1846	Oceanodroma	1				
1847	P. longif. a	1				
1850	Collared P	1				
1855	Collared P	1				
1903					Sunset,	

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7-28-64

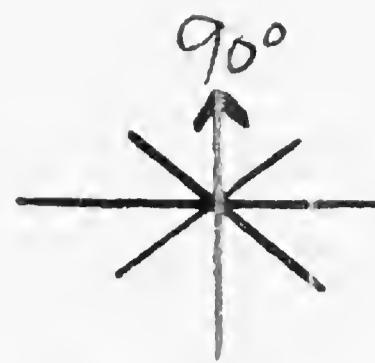


SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

DATE 26 August 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0709					Sunrise	
0723	Sleas-Pet	1				
0732	P. leucoptera	1				
0736	Pterodroma	1				
0745	P. leucoptera	1				
0747	W-Faced SP	1				
0810	Pterodroma	1				
0832	Pterodroma	1				
0845	P. leucoptera	1				
0859	Pterodroma	1				
0900	P. leucoptera	2				
0925	Pterodroma	1				
0948	O. Tethys- <del>Pet</del>	1				
0954	P. leucoptera	1				
1002	P. leucoptera	1				
1005	Pterodroma	1				
1025	P. leucoptera	1	S			
1026	P. leucoptera	1	S			
1058	P. leucoptera	1				
1100	P. leucoptera	2				
1108	Storm Petrel	1				
1109						
1200						
1329	P. leucoptera	1				
1353	Oceanodroma	1				
1403	Oceanodroma	1				
1450	Oceanodroma	1				
1523	P. leucoptera	1				
1533	Pterodroma	1				
1547	Sooty Tern	1				
1559	Oceanodroma	1				
1600	1715					
1717	Oceanodroma	1				
1722	Sooty Tern	3				
1741	P. leucoptera	1				
1803	P. externa	1				
1829	P. leucoptera	1				
1918	P. leucoptera	1				
1919						

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7-28-64

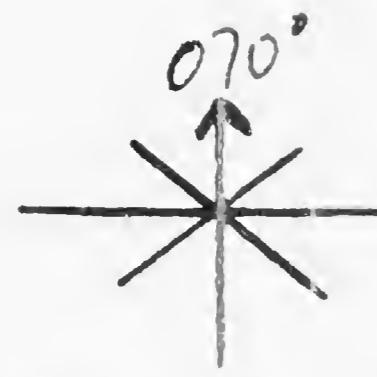


SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

DATE 27 August 1967  
Pg. # \_\_\_\_\_

time	species	#	dir.	hgt.	remarks	loc.
0716						
0725	Shear-Pet	1				
0733	Collared Pet	1				
0742	Oceanodroma	1				
0744	Wh-wing, Pet	1				
0827	Wh-wing, Pet	1				
0835	Wh-wing, Pet	1				
0848	Wh-wing, Pet	4				S-P-2
0907	Wh-wing, Pet	1				Ptno-1
0909	Shear Pet	1				
0916	Oceanodroma	1				Ocean-1
0930-1130						Break
1143	Wh-wing, Pet	1				Col-8
1210						
1230	Wh-wing Pet	1				W-W-21
1315	Collared Pet	1				200-1
1345-1500						Break
1520	Pterodroma	1				
1526	Leach's Type	1				
1536	Wh-wing, Pet	1				
1543	Collared Pet	1				
1612	Collared Pet	1				
1623	Wh-wing Pet	1				
1634	Collared Pet	1			S	
1643	Collared Pet	1				
1653	W-wing Pet	1				
1700-17						Break.
1725	Collared Pet	1				
1743	W-wing Pet	1				
1803	W-wing Pet	1				
1812	W-wing Pet	1				
1838	W-wing Pet	1				
1843	W-wing Pet	1				
1845	Collared Pet	1				
1846	W-wing Pet	1				
1847	W-wing Pet	1				
1848	Wh-Fac Sp	1				
1859	W-wing Pet	1				
1914						Sunset

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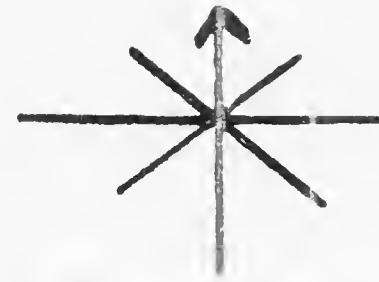
SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

DATE 28 August 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0704					Sunrise	
0725	W-face SP	1			Flying To waves and wind 20 Kts. Gliding	
0730	W-Face SP	1			Occasionally putting foot in H2O. Dabbling off	
0734	Wh-wing Pet	1			but still proceeding along same path. Not <del>per</del> strong like	
0740	W-Face SP	1			Noddy gath	
0750	W-Face SP	1			Gliding slowly over waves, dabbling foot in H2O, then	
0805	Wh-wing Pet	1			with wings + proceed as above	
0815	Wh-wing Pet	1				
0818	W-Face SP	1				
0821	Oceanodroma	1				
0821	W-Face SP	1				
0834	W-face SP	1				
0831	W-face SP	1				
0844	W-Face SP	1				
0844	W-wing Pet	1				
0847	Oceanodroma	1				
0902	Wh-face SP	1				
0903	Wh-wing Pet	1				
0906	W-Face SP	1				
0907	W-Face SP	1				
0908	W-Face SP	1				
0916	Wh-wing Pet	1				
1033					brevi?	
1045	W-wing Pet	1			10170°	
1050						
1200					Stop for Station	
1212	Shear Pet	1			Resume Obs	
1221	W-wing Pet	1				
1230						
1256	Peach's Type	3			Underway 160°	
1358	Peach's Type	1				
1412	W-wing Pet	1				
1413	W-wing Pet	1			brevi?	
1415	2					
1535	Shear Pet	1			Stop	
1554	Peach's Type	2				
1556	Peach's Type	1				
1600	1715					
1720	Peach's Type	2			Break on Station	
1808						
					Underway	

SI-MNH-958e  
7-28-64

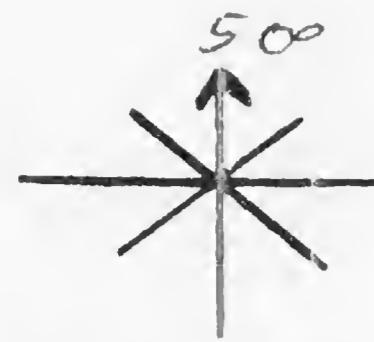
SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E



DATE 28 August 1967  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1815	Oceanodroma	1				
1829					6,1850	
1838	W-wing Pet	1				
1843	Brown Pet	1				
1848	Pterodroma	1				
1901					Leucet	

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7-28-64



SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

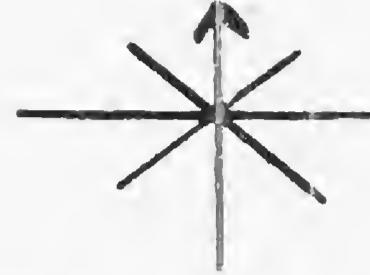
DATE 29 August 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0600						
0712	Shear-Pet	1			Sunrise	
0727	Kerm. Pet	1			dark.	
0758	Bird	1				
0800-0900						
0931	Pterodroma	1			Break	
1030-1200					Break	
1226	O. Manxani	1				
1230	W-wing Pet	1				
1236	Shear-Pet	1				
1303	W-wing Pet	1			Break	
1436	W-wing Pet	1				
1443	W-wing Pet	1			Break	
1452	Readistype	1				
1526	Wh-Face SP	1				
1530	Wh-face SP	1				
1536	Oceanodroma	1				
1552	Readistype 2	2				
1600-1700		1			Break	
1518	Readistype	1				
SF	1729	Wh-wing Pet	5			
	1756	Readistype	1			
	1757	Wh-wing Pet	1			
	1846	Wh-Face SP	1			
	1854				Sunset	

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7-28-64

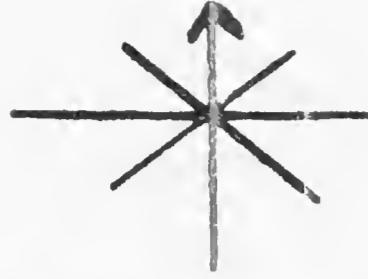
SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

DATE 30 August 1967  
Pg. # 1



	time	species	#	dir.	hgt.	remarks	loc.
	0830						
2	0858	Oceanodroma	1				
	0923	Oceanodroma	1				
	0947	Oceanodroma	1				
2	1015	Glear Pet	1				
	1034	Phalarope	1				
8	1035	O. markhami	1				
	1038	Beach's SP	1				
	1043	Beach's SP	3	CD			
	1044	Pale-foot Shear	1			on H <sub>2</sub> O reliability 2 <del>on H<sub>2</sub>O</del>	
	1110	Oceanodroma	1				
	1120-1220						
10	1238	Oceanodroma	1				
	1246	O. markhami	1				
F	1305	Lead's Type	5				
	1310	Pterodroma	1			on H <sub>2</sub> O	
	1315	O. markhami	2				
	1332	Beach's SP	1				
	1334	Lead's Type	3				
21	1335	W-wing Shear	2				
	1340	O. markhami	1				
		O. tethys	1				
		Beach's SP	1				
	1345	Lead's SP	1				
	1412	Lead's Type	1				
	1415	O. markhami	1				
SF	1418	Lead's SP	6				
	1426	Beach's SP	1				
		O. tethys	2				
	1434	Wh-face SP	1				
	1435	O. markhami	1				
	1438	Beach's Type	2				
	1458	Beach's Type	2				
	1502	Beach's SP	1				
	1502	Wh. face SP	1				
	1511	O. markhami	1				
	1515	Wh-Faces P	1				
	1516	Wh-Face SP	1				
	1517	O. markhami	1				
	1535	Wh-Faces P	1				

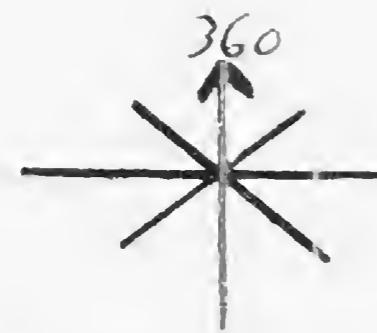
SI-MNH-958e  
7-28-64



SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

DATE 30 August 1969  
Pg. # 2

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7-28-64



SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG — E

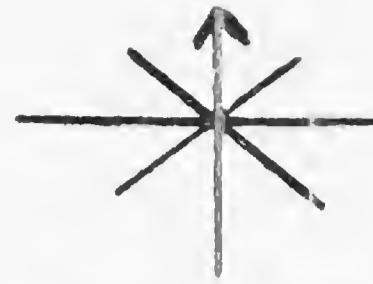
DATE 31 August 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0700					Begin Obs.	
0712	Oceanodroma	1				
0718	Oceanodroma	1				
0718	Leach's Type	1				
0721	Phalarope	1				
0729	Red Phalarope	1				
0729	O. markhami	1				
0733	Oceanodroma	1				
0743	Leach's Type	2				
0744	Phalarope	1				
0745	O. markhami	1				
0751	Oceanodroma	2				
0756	Phalarope	1	SE			
0757	Leach's Type	1				
0800	Leach's Type	1				
0801	Oceanodroma	1				
0816	O. Tethys	1				
0816	Red Phalarope	1	E		Stop	
0821	Red Phalarope	1				
0825	Oceanodroma	1				
0830						
0834	Red Phalarope	3				
0834	Oceanodroma	1				
0838	Phalarope	1	W			
0840	Phalarope	1	W			
0856	Phalarope	1				
0903	O. Tethys	4				
0907	Red Phalarope	1				
0918	Leach's SP	14				
24	O. tethys	1				
0930	Red Phalarope	1	SE			
0930	Oceanodroma	1				
0940	Oceanodroma	2				
1010	Oceanodroma	1				
1025	Oceanodroma	1				
1035	Red Phalarope	2				
1039	Oceanodroma	2				
1049						
1145						
1155	Oceanodroma	2				
1201	Phalarope	1				
1220						
1318	Oceanodroma	1				
1326	Red Phalarope	2				
1331						
					Underway 355°	

$$\begin{array}{r} 105 \\ 107 \\ \hline 7 \\ 1805 \\ -28 \\ \hline 7 \\ 1737 \end{array}$$

SI-MNH-958e  
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SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E



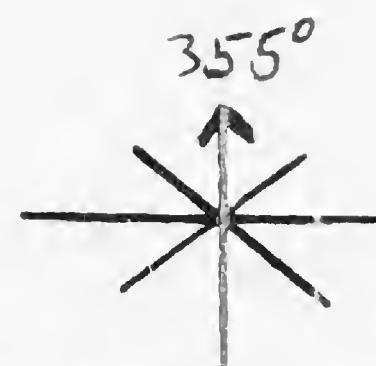
DATE 31 August 1967  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
83	Leach's T. type	1				
60	Leach's T. type	2				
1408	Oceanodroma	2				
1412	Red Phalarope	1			on H <sub>2</sub> O	
1418	Leach's T. type	1				
1420	Oceanodroma	1				
1421	Phalarope	4			on H <sub>2</sub> O	
1422	Phalarope	2			on H <sub>2</sub> O	
1425	Red P. Phalarope	2			on H <sub>2</sub> O	
1430	Red P. Phalarope	2			est gr.	
1435	Leach's T. type	2				
1438	Red Phalarope	1				
FF	Red Phalarope	5			on H <sub>2</sub> O.	
1503	Oceanodroma	1				
1516	Red Phala	1				
14	1523	Oceanodroma	1			
	1526	Oceanodroma	2			
	1538	Oceanodroma	1			
	1550	Oceanodroma	1			
	1555	Phalarope	2			
	1600	— 1715			Break On station	
	1720	Oceanodroma	2		seen at distance - very large all dark grey broad	
	1723	Leach's T. type	1		pointed wings impressed me as something I hadn't	
	1740	Procellaria?	1		seen before	
	1750	Swallow Tailed Gull	1		adult - Forked Tail seen. black hood.	
	1810	Oceanodroma	2			
	1826	O. t. t. g.	1			
	1828					
	1836					

Break On station  
seen at distance - very large all dark grey broad  
pointed wings impressed me as something I hadn't  
seen before  
adult - Forked Tail seen. black hood.

Large Underway Sunset

Bl. Top  
wh. Mantle similar to Sabine's  
at least Herring Gull size.

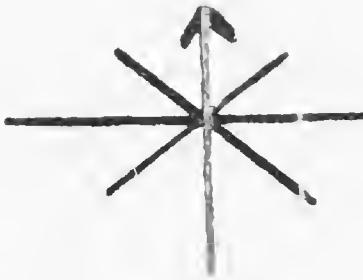
SI-MNE-958e  
7-28-64SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- EDATE Sept 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0630						
0643	tern sp	1				
0645	Oceanodroma	1				
0705	Oceanodroma	1				
49	Oceanodroma	1				
0707	Oceanodroma	1				
0713	O. Tethys	1				
0719	O. <del>melanoptera</del> <del>melanoptera</del>	1				
70SF	frigate	3				
—	Sooty Tern	40±5	SE			
SF	Pterodroma	1				
0744	Sooty Tern	30±5				
	frigate	1	~			
67	Shear-Pet	2	SE			
0744	Oceanodroma	1				
0744	Whi-faced SP	1				
0753	L-T frigate	2				
0753	O. tethys	1				
0803	Sooty Tern	2				
0803	Oceanodroma	2				
0804	Shear-Pet	1				
	Dark-rung P	1				
	Kem Pet	1				
0805	Collared Pet	1				
SF	Sooty Tern	15±2				
	frigate	2				
0815						
—	0. Tethys	3				
0830						
0830						
18	frigate	4				
0902	frigate	1				
0902	O Tethys	1				
0905	Sooty Tern	1				
0906	Lead's Type	1				
0906	O tethys	2				
—	0907					
—	Sooty Tern	5	SW			
—	0918					
—	O tethys	2				
—	0925					
F	O tethys	1				
0930	Sooty Tern	75±5				
Y5						
0943	Shear-Pet	1				

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7-28-64

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DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

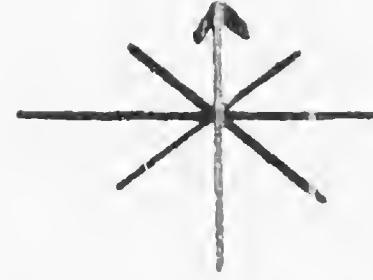
DATE 1 Sept 1967  
Pg. # 2



time	species	#	dir.	hgt.	remarks	loc.
1020	Frigate	1				FF M 130
1021	Sooty Tern	1	SW			A 220
1043	Bl-face Boob	1				
1045	1130				Break On station	
1150	O. Tillys	2				
1202	Bl-face Boob	1				
1255	Red-f Booby	1			Subadult Underway	
1313						
1323	O. Tillys	2				
F 1350	frigate	4				
	Sooty Tern	10			dist-out Frigates appeared to be feeding	
1351	O. Boob	1				
1401	frigate	2				
1515-30					Stop	
1512	Wh-wing Pet	1				
1600-1745						
1823	frigate	1			Stop for Station Cane 13	
1830	Oceanodroma	1				
1835					Sunset	

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DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

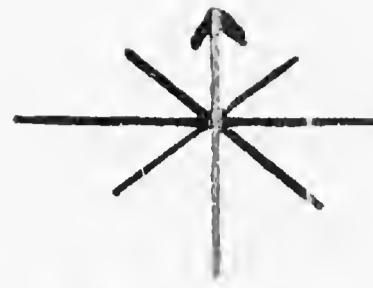


DATE 2 Sept 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0627					Sunrise	
0635	frigate	2			1 SA - 1 A 07	
0635	Bl.-face Boob	1			adult - orange bill	
0636	Red-f Booby	4			subadult	
0641	frigate	1			SA 3	
0643	Sooty Tern	1				
0653	Leach's SP	1				
0700	frigate	1			Ad ♀	
0715	Oceanodroma	1				
0720	O. Tethys	1				
0723	O. Tethys	1				
FF 0727	O. tethys	1			Leach's SP	
					Feeding	
SF 0740	BS P Petrel	2				
	Oceanodroma	1				
	frigate	5			Circling	
0741	W-wing Pet	1				
0755	frigate	3				
0756	Shear-Pet	1				
0756	Black SP	1				
	Leach's SP	1				
0802	Collared P	1				
0814	O tethys	1				
0815					Stop	
0816	Kemp Pet	1			dark	
0830					Underway	
0855	BL Storm P	1				
0904	frigate	1				
0905	Bl.-face B	1			Imm.	
0936	Shear-Pet	1				
0950					1 Pseudorca?	
0954	Kemp Pet	1			Dark	
1003	frigate	2				
1008	Collared P	1				
1025	Shear-Pet	1	SW			
1045-1200					Break On Station	
1248	O. Tethys	4			Nelson Tow 1226-1316	
NF 1325	Gr Frigate	4			Bait fish jumping - No feeding. Floating	
	Red-f Booby	1			long. Small, black <sup>↓</sup> zigzag shape	
1326	W-wing Pet	1			Subadult	

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7-28-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E



DATE 2 September 1967  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
54	1355 Oceanodroma	3				
	1356 JF Petrel	2				
	1357 O. tenuirostris	2				
	1418 Wedgetail	1			dark	
	1442 JF Petrel	1				
	1444 Wedgetail	1			dark.	
	1454 Peach's Tern	1				
	1454 Red Phalarope	1			winter plumage	
	1505 Frigate	3				
	1519 O. tenuirostris	2				
	1545 O. tenuirostris	2				
	1600-1700				break and station	
	1712 Shearwater	1				
	1715 JF Petrel	1				
	1716 Wedgetail	1			light underwing	
	1800					
	1838				Scusset.	

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DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

DATE 3 Sept 1967  
Pg. # 1

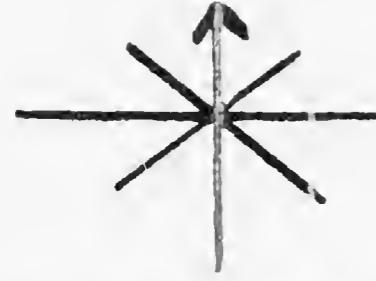


time	species	#	dir.	hgt.	remarks	loc.
0625						
0638	Red-f Booby				Sunrise	
0641	P. exotica	1			Immature	
0642	Com Noddy	1				
0653	Collared Pet	1			Subadult or Immature	
0716	Phalarope	2	S			
0721	Phalarope	2	S			
0733	Manx Shear	1				
0733	W-wing Pet	1				
0734	P. exotica	1				
0735	Wedgetail	1			Dark	
0735	W-wing Pet	1				
0745	P. exotica	1				
0752	otilly	1				
0752	Shear Pet	1				
0805	Kerm Pet	1			Dark.	
0808	Kerm Pet	1				
0811	Wedgetail	1			light, Movie	
0814	Wedgetail	1			Dark.	
0825	Phalarope	1	S		light	
0830	W-wing Pet	1				
0833	SFP Pet	1				
0840	AF Pet	1				
0847	Phalarope	1	S			
0854	Gr? frigate	1				
0854	Wedgetail	1				
0900	Kerm Pet	1			Dark.	
0903	Shear Pet	1				
0905	Wedgetail	13				
15	Gr Frigate	4			10 dark 3 light	
15	sooty Tern	50 ± 10				
Ar Tern	sooty Tern	1			2 immature seen	
	Juigar	2			40 adult Rest?	
0915	W-wing Pet	1				
0920	W-wing Pet	1				
0921	Phalarope	1				
0933	Oceanodroma	1				
0950	Wedgetail	1				
1003	Wedgetail	1			Dark.	
1012	Wedgetail	2			light.	
1012	Phalarope	1				
1020	Wedgetail	2			on H2O dark	
1022	Wedgetail	1			Dark.	
1022	Red-f Booby	1			Dark	
					1st Year	

SI-MNH-958e  
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SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

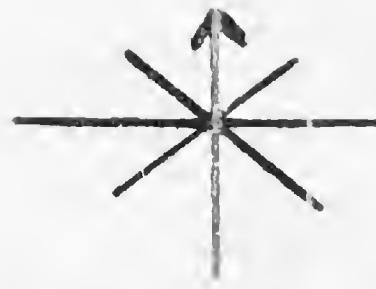
DATE 3 Sept 1967  
Pg. # 2



time	species	#	dir.	hgt.	remarks	loc.
112	Wedge-tail	1			Light	
1045	1200					
1226						
10240	Wedge-tail	1			Break on station	WTS-300
F					Upwind	
1243	Wedge-tail	1			Dark	
	Frigate	12				
		#				
1245	Bl-Faced Booby	1			1 light, 1 dark on H2O	
1250	Leach's SP	1				
1255	Frigate	1			SA chasing WTS Uncessful	
		2				
1259	JF Petrel	1				
SF	Frigate	1				
1310	Sooty Tern	10				
77	JF Petrel	1			Searching	
	Wedge-tail	3				
F	Sooty Tern	20±5				
	Wedge-tail	20±5				
	Artic. Tern	1				
	JF Petrel	3				
MF	Wedge-tail	5				
SF	Sooty Tern	5				
TF	Sooty Tern	8	NW			
	Wedge-tail	2				
275 209						
F	Leach's SP	1				
	Wedge-tail	250±25				
	Frigate	1				
	Sooty Tern	3				
	Bl-Faced Booby	1				
	Wedge-tail	4				
	Wedge-tail	2				
	Artic? Tern	1				
	Bl-SP at	2				
	Leach's SP	1				
	Wedge-tail	1				
	Jaeger sp	1				
	JF Petrel	2				
	Red-F Booby	1				
	Sooty Tern	1				
	Wedge-tail	1				

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7-28-64

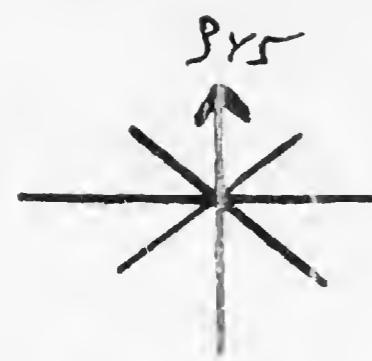
SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E



DATE 3 Sept 1967  
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
494	Shear Pet	1				
	Leach's Tya	1				
	Oceanodroma	1				
	Red P Gull	3				
	Oceanodroma	2				
	Kittiwak	1			Dark	
	Jayson	1				
	Phalarope	1				
F	Wedge-tail	3			Dark	
	Arctic Tern	4			Feeding	
	Wedge-tail	3			dark	
	JF Petrel	1				2 Tuna sp? gear.
SF	Arctic Tern	1				
	Sooty Tern	12			Searching	
	Leach's SP	2				
	O. tethys	1				
		1				
	Shear Pet	1				
	Collared Pet	1				
SF	Sooty Tern	29			adult	
	Arctic Tern	1				
	Wedge-tail	2			Dark	
184	Oceanodrom	3				
60	Red T Tropic	1				
5/6/60	1715					
FF	Wedge-tail	1			BREAK	
	Oceanodrom	25			Light	
	Leach's Tern	1				
					feeding over gasfage slick.	
					underway	
	Leach's SP	1				
	BL S Petrel	1				
	O. tethys	1				
	Black SP	1				
	Leach's SP	2				
	Leach's SP	4				
	Black SP	1				
	Leach's SP	1				
	JF Petrel	1				
					Sunset	

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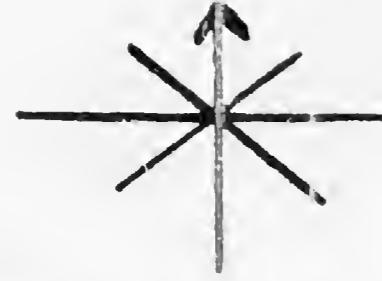
SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

DATE 04 September 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0623						
0627	Jaeger	3				
0627	Red-f. Booby	3				
0627	Bl-fac Booby	1				
0628	Oceanodroma	1				
0628	Shear-Pet	1				
0635	Wedgetail	1				
0636	Wedgetail	3			light	
0642	Wedgetail	1			light / dark	
0643	Jaeger	1			light	
0650	Wedgetail	2			light	
0655	Kerm. Pet	1			light	
0655	Black SP	1			dark	
0701	Oceanodroma	4				
0702	Wedgetail	2			light Movie	
0705	O. Tillys	1				
0705	Phalarope	2			at 20.	
0710	Wedgetail	2			dark	
0710	Wedgetail	1				
0711	Bl-fac Booby	1			light feeding	
0718	Wedgetail	1			immature	
0720	Phalarope	1			dark	
0720	Wedgetail	5				
0731	Wedgetail	2			light	
0744	Kerm. Petrel	1			light	
0754	Oceanodroma	2			DARK	
0756	Phalarope	1				
0804	Wedgetail	2			light	
0805	JF Petrel	1			dark	
0812	Wedgetail	3			dark	
0812	Kerm Pet	1			dark	
0816	Wedgetail	4			dark	
0818	Black SP.	1			dark / light	
0820	Wedgetail	2			light / dark	
0824	Phalarope	2				
0827	Red Phalarope	5				
0827	O. Tillys	4			Traveling	
0831	Lead-b SP	1				
0840	Wedgetail	2			light	
0843	Wedgetail	1			dark	
0855	Sooty Tern	5				
0940	1-18				Stop	

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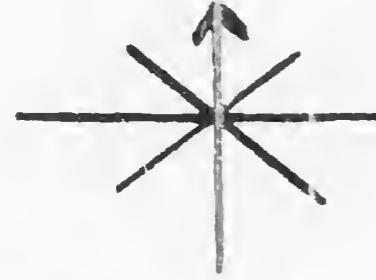


DATE 4 Sept 1967  
Pg. # h

time	species	#	dir.	hgt.	remarks	loc.
0943	Kern Pet	1			dark	
0940						
1025	Frigate	4			Flock (School?) breaking surface	
1025	B. ShearSP	1			Capt says	
1032	Red Phal	1			75±25 Delphids appear to be feeding.	
1043					Movie	
1045	1145				frigate overhead.	
1155	Bl. Face Booby	2			Turtle - Movie	
1155	Swallow	1			1st year	
1223					Unknown	
F 1238	Wedgetail	15			7 light + dark rest <del>dark</del> <del>dark</del> on	
	juv	1			<del>dark</del> adult	
1255	Bl. Face Booby	1			adult	
1257						
1250						
F 1300	Wedgetail	50%			Turtle one	
1320	Oceanodroma	1			<sup>20</sup> light - 30 dark. not 20.	
1321	Manx Shear	1				
1330	Kern Pet	1			Intermediate.	
1342	Kern Pet	1			Dark	
1345	Oceanodroma	2				
1348	Wedgetail	1			Dark.	
1351	Wedgetail	2				
1351	Phalarope	1			Light	
1410	Manx Shear	1			adult	
1415	Wedgetail	2			1 light + 1 dark.	
1430	55				<del>rain</del> Rain	
1435	Red's Tropic	1				
1455						
1501	Wedgetail	1			One Marlin	
1507	Shear-Pet	2			dark	
1516	Wedgetail	1			<del>dark</del> Dark	
1521	Wedgetail	1			<del>dark</del> Dark	
1530	Black SP	3			Light	
1531	Red-F. Booby	3			subadult	
1540	Blue-F. Booby	1			Immature	
1545	Wedgetail	3			- dark	
1546	Wedgetail	2			- light	

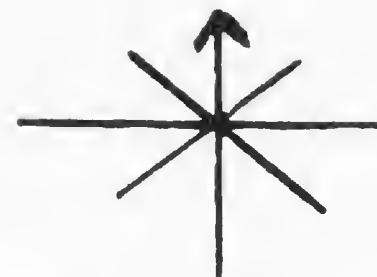
SI-MNH-958e  
7-28-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E



DATE 4 Sept 1967  
Pg. # 3

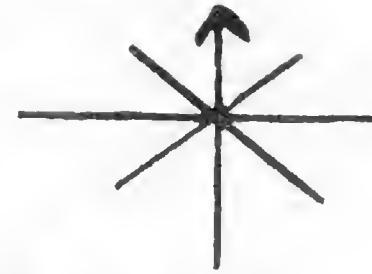
time	species	#	dir.	hgt.	remarks	loc.
1545					20°S	Pilot Whale?
1546	Red-Bell Tropic	1			adult	
1600	1715					
1726	Wedge-tail	1			Stop Obs. on Station	
1737	Phalarope	1			light	
1742	Red-t's Type	1				
1757					Underway.	
1808	Wedge-Tail	1			light	
1818	Shear-Pet	1				
1830	Wedge-tail	2			light	
1839					Sunset.	
						184



DATE 5 Sept 1967

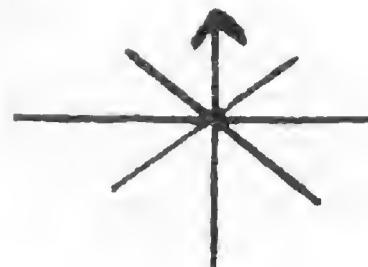
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
TF	0622					sunrise	
	0627	Red-F. Booby	29				
		Wedgetail	15				
		Bl-face Booby	1				
	0630	Artic? Tern	2				
	0638	Bl-face Booby	1				
TF	0645	Bl-face Booby	5			adult crav x bill	
	0659	Manx Shear	1			1 ad 4 1st year	
F	0712	Red-F. Booby	18				
	0712	Shear	1			1st year joined other	
		Pan-faegn	1			Marie	
MF	0715	Wedgetail	5				
	0720					light - Movie	
	0737	Red-bill Tropic	1			Turtle	
	0740	Oceanodroma	1				
	0740	Phalarope	1				
	0745	Phalarope	1				
	0749	Red-bill Tropic	2				
	0818	Phalarope	1				
	0845	Kerm. Pet	3			Ad	
	0905	Red-bill Tropic	1			Dark	417
F	0912	Red Phalarope	7			on National Slick	WTS-31
	0912	Tern	2				
	0920	Red Phalarope	1			Movie	118-12
	0923					One Turtle	817-4
	0955	Red Phalarope	1				
	1015	Bl-face Booby	1				
	1015	Wedgetail	1			1st year	
	1035	Red Phalarope	2			light	
	1045						
	1310						
	1323	Artic? Tern	1			Break on station 1250 underway	
		Red Phalarope	1				
	1345	Phalarope	1				
	1356	Phalarope	1				
	1407	Kerm. Pet	1				
	1418	Red Phalarope	1				
	1434	Phalarope	1				
	1438						
	1443	Bl-face Booby	1			10 Cetaceans	
	1450	Bl-face Booby	3			ad on H <sub>2</sub> O - Marie	
	1450	Phalarope	1			too far to tell age.	
	1458	O. Tern	1				
	1505	Swallow	1				
	1511	Artic? Tern	1				
	1514	Oceanodroma	4				



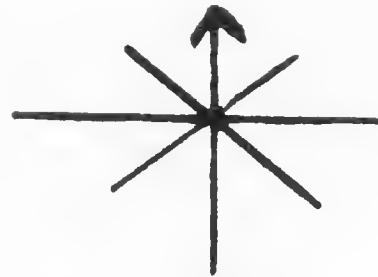
DATE 19 Sept 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0559					Sunrise.	
0607	Sooty Tern	2				
0618	Sooty Tern	2			adult	
0623	Sooty Tern	1			adult	
0624	Sooty Tern	1			adult	
0625	Red + Booby	1				
TF 0628	Sooty Tern	5	NE		Subadult	ST-76
0629	Shear-Pit	1				REB-45
0630	Blue + Booby	1				P-2
0633	Sooty Tern	2				18-20
0635	Pink + Shear	1	SE			18-21
0636	Red-bill Trop	1			adult.	19-20
0640	Sooty Tern	4	N		adult	P-2
0645	fish-f Shear	1	SE			Adult
0646	Sooty Tern	4	S			19-21
0647	Sooty Tern	1			adult	19-21
0648	Sooty Tern	1	N			19-21
0649	R-f Booby	1				19-21
0650	R-f Booby	3				19-21
0653	Sooty Tern	3	S		adult White phase	19-21
0654	Sooty Tern	2			ad	19-21
0705	Bl-f Booby	2			ad	19-21
0708	Sooty Tern	2			ad	19-21
	L-T Jaeger	1			Chaining Tern	149
0719	Sooty Tern	2				
0719	Shear-Pit	1				
0723	R-f Booby	1			Ad	
F 0730	R-f Booby	20			<del>all dark but with baby blue (adult-colored) bill</del>	
	Sooty Tern	7			Boobies feeding	
	B-face Booby	15			<del>sooty</del>	
0735	<del>SOOTY TERN</del> Shear-Pit	1			ad	
0745	R-F Booby	4			ad	
SF 0753	Sooty Tern	37			<del>SOOTY TERN</del> ad with dark tail	
SF 0756	R-F Booby	11				
	B-Face Booby	2				
0805						
0810	R-f Booby	2			4 Killen WAs	
0815						
0818	Leach's SP	1			Star <del>SOOTY</del> Blue + yell - Dark - white irregular	
0830						
0844	R-f Booby	2			Ad	
					Underway	
					light phase Ad	
					Dark tail	



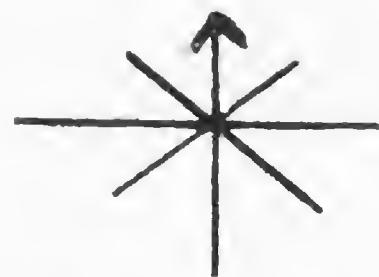
DATE 19 Sept 1967  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
FF 0853	Shear-Pet	1				
0855	R-F Booby	12			feeding	
	Sooty Tern	4				
0858	D-n Petrel	1				
0908	Sooty Tern	2				
0915	R-F Booby	12				
	Frigate	2				
FF 0915-	40					
	frigate	5				
	B-F Booby	25				
	Red-F Booby	325±50				
0917	Wh-wing Pet	1				
TF 0945	Sooty Tern	12	5			
0945	Artic Tern	1				
SF 1000	Artic Tern	5				
	Sooty Tern	110±10				
	R-F Booby	8				
	B-F Booby	1				
	frigate	3				
SF 1010	R-F Booby	155±25				
	B-F Booby	20				
	frigate	1				
	Sooty Tern	3				
SF 1018	R-F Booby	150±5				
	booby	50				
FF 1025	R-F Booby	200±10				
	B-F Booby	75±10				
	Sooty Tern	10				
	Andaman Sh	6				
	Mag Frig	5				
1030	1145					
1205						
1230	Mag Frig	2				
1240	Sooty Tern	1				
1241	Oceanodroma	1				



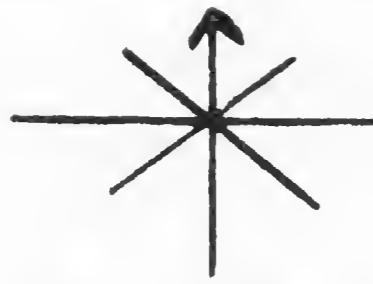
DATE 55 Sept 1967  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1523	Shear-Pet	1				
1530	Manx Shearw	1				
1534	Red-Foot B	1			2nd year.	S-Pl-1
1600	- 1715				Break On station	Plat 1
1716	Oceanodroma	1				AFB 1
1753						
1820	Wedgetail	1			Underway	
1830	Sooty Tern	10			Right	ST 10
1830	R-T Jaeger	1				
1843					Sunset.	103-1
						16



DATE 6 September 1967  
Pg. # 1

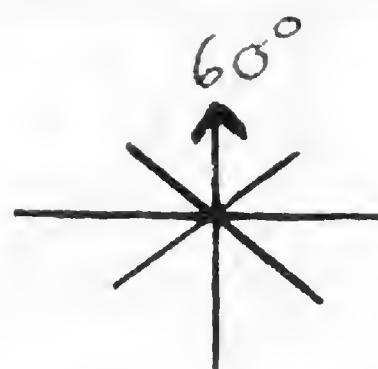
time	species	#	dir.	hgt.	remarks	loc.
MF	0629				Sunrise	
	0630	Red-F Booby	12		<del>Seabirds</del> 1st year	
	0638	Bl-F Booby	1		adult	
	0638	Oceanodroma	1			
	0638	BR-Face Boob	1			
	0704	Oceanodroma	1		1st year	
	0704	Shear-Pet	1			
	0710	Jaeger	1			
	0715				Rain	
	0755	Red-Bill Tropic	1			
	0756	<del>Red</del> Phalarope	1			
	0808	Phalarope	3			
	0815	Phalarope	1			
	0820	Red Phalarope	2			
	0830					
FF	0843	Frigate	4		Rain type	
	0940	<del>Red</del> Tern	25±5		Distant prob. feeding	
	0958	Booby sp	20±5			
	1007	Red Phalarope	3			
	1030	Red Phalarope	2	E		
	1034	Red Phalarope	1	E		
	1042	Red Phalarope	3	E		
	1045	1200				
	1226				Break On station	
	1228	Red Phalarope	2		underwater	
	1320	Bl-Face Boob	1			
	1320	Red Phalarope	1			
FF	1343	Red Phalarope	2		Imm	
	1355	Manx Shear	1			
	1415	Red Phalarope	2			
	1426	Shear-Pet	1			
	1440	Bl-Face Boob	1			
	1446	Red Phalarope	1			
	1448	Red Phalarope	1			
	1453	Whimbrel	4	SE		
	1500	Red Phalarope	3	SE		
	1500	Manx Shear	2			
	1525	Red Phalarope	2	SE		
	1530	Phalarope	1			
	1533	Bl-Face Boob	4			
		Red-F Booby	8		Bait fish jumping.	
		Manx Shear	10		Intergon	



DATE 6 Sept 1967

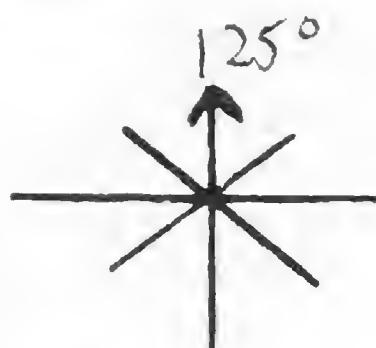
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1540	frigate	1				
1545	Br Booby	1				
1545					School 100± Mullet feeding on FF <del>not tuna</del>	Shipjach
1548					Another school species? - Snell	
1600-1715					Break and station	Shipjach
1730	Phalarope	1				
1744	Phalarope	1				
1800	Phalarope	1				
1808					endway 750	
1840	Red Phala	3				
1841	Black Tern	1				
1842					Sunset	



DATE 7 Sept 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0620	<del>asym</del>				<del>asym</del> begin 065.	
0626	Tern Black	4	SW			
0631	BL Tern	1	SW			
0633	Bl Tern	1	SW			
0633	Br. Booby	1	SW			
0636	Br Booby	1	SW			
0636	BL Tern	1	SW			
0638	BL Tern	2	SW			
0638	Br Booby	1	SW			
0643	BL Tern	4	SW			
0643	Br. Booby	1	SW			
0650	Br Booby	1	SW		Immature	
0652	Br. Booby	2	SW			
0652	frigate sp.	1	O			
0656	Br Booby	4	SW			
0710	Phalarope	4			2 imm. 2 subadult	
0712	Br. Booby	3			on H2O	
TF	Br. Booby	7	SW		Imm.	
0726	Br. Booby	2	SW			
0726	BL Tern	2	SW			
0735	Br Booby	4	S			
0743	Red Phala.	1				
0746						
0800	Br Booby	1			1/2 40°	
0803	Phalarope	1			on H2O	
0803	BL Stnm	1				
0804	Br Booby	1				
0820	BL Stnm Pit	1			Imm.	
0837	frigate	1				
0850	<del>Frigate's b.</del>	1				
0855	Roughing				Imm.	
0857	Br. Booby	2			10 S. griffmani	
0862					5 Stenella griffmani.	
0930					6 are.	



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Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0830					Begin. obs.	
0835	Phalange	2				
0840	Nort Phala	1				
0841	Br Pelican	1				
0846	Phalarope	2				
0858	Frigate	3				
0902	Frigate	1				
0902	Phalange	1				
0903	Mag Frig	1			Ad ♀	
0930						
1145					Care	
1200	Bl-Foot Boob	1			Resume	
1201	Booby up	1			Imm	
1218	Bl-Face Boob	1				
1318	Bl Tern	2	ESE		adult	
1320	Tern	1				
1326	Red Phala	1				
1340	Bl Tern	1				
1346	Phalarope	2				
1350	Bl-fac booby	1				
1357	Bl. Tern	1			Subadult.	
F 1405	N. Phala	70	40			
1445					ant/20 feeding	
1715					Care	
1721	tern up	2			Resume	
1721	Manx Sh	1				
1726	Manx Sh	4				
1726	Oceanodroma	1				
1730	<del>Black-tail Sh</del>	1				
1732	Phalarope	2	5		light	
1736	Phalarope	2				
TF 1739	Phalarope	5	5			
1739	Oceanodroma	1				
1743	Phalarope	3				
1743	Manx Sh	3	5			
1743	Wedgetail	3			light	
1749	tern Sooty	8				
1749	Wedgetail	1			light	
1749	Phalarope	3				
1751	N. Phala	3			ant/20	
FF 1755	Sooty Tern	7				
	Wedgetail	3				
	Manx Sh	2				
					light Feeding.	



DATE 14 Sept 1967  
Pg. # 2

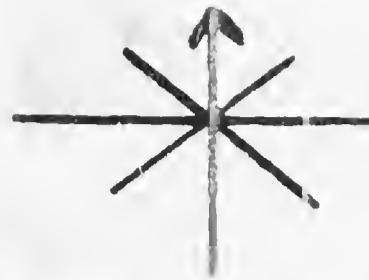
time	species	#	dir.	hgt.	remarks	loc.
FF 1815	Sooty Tern	25		5		
	Wedgetail	12				
	<del>Albatross</del>	5		10		
	Mangrove					
	Shearwater	25				
1816					feeding light sunset	



time	species	#	dir.	hgt.	remarks	loc.
0630					Begin	
FF 0635	Bl-U Shear	25±5				613-6
FF 0640	Bl-U Shear	60±10				768-1
FF 0648	Bl-U Shear	50±5				619-150
0648	Bl-fa Booby	3				618-4
0649	Phalangre	1				
0650	Wedgetail	3				608-12
F 0655	Bl Stnm Pet	12				
FF 0700	Bl-U Shear	90±10			height. following ship	618-1
0715						
0716	Leach's SP	1			10± Tursiops Movie	1181
0720					Entered calm area Thick with medusae +	
0735	Prothon. Wnd	1			Star	
FF 0740	Bl-U Shear	95±10			adult	terephore
0745	Wedgetail				1 Turtle	
0746	Bl-U Shear	1			dark	
0748	Bl-fa Booby	1				
0748	R-f Booby	2			1st year	
0803	Tern Pet	1			dark.	
0822					Underway S 180°	
0835					Turtle(1) Movie	
F 0837	Bl-U Shear	11				
FF 0843	Bl-U Shear	75±10			on H <sub>2</sub> O	
0853	Leach's SP	1				
0853					Turtle(2)	
FF 0855	Bl-U Shear	45±5				
FF 0859	Bl-U Shear	175±10			feeding	
F 0901	Bl-U Shear	60±10			on H <sub>2</sub> O	
0903	Wedgetail	1			dark.	
F 0904	Bl-U Shear	64			on H <sub>2</sub> O	
0904	Wedgetail	1			right	
F 0907	Bl-U Shear	30±5			Turtle(1)	
F 0908	Bl-U Shear	35±5			on H <sub>2</sub> O	
0908	Leach's SP	2			on H <sub>2</sub> O	
F 0910	Bl-U Shear	75±10			on H <sub>2</sub> O	
FF 0912	Bl-U Shear	100±10			feeding	
F 0915	Bl-U Shear	30±5			on H <sub>2</sub> O	
F 0920	Bl-U Shear	90±10			on H <sub>2</sub> O	
0920					4 Tursiops	
0925					Turtle(1)	
F 0930	Bl-U Shear	40±10			on H <sub>2</sub> O	

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SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG — E



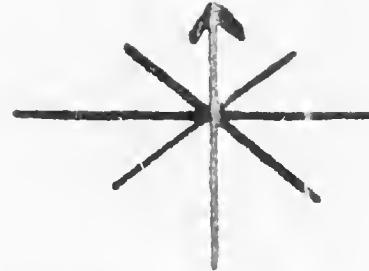
DATE 15 Sept 1967  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
F 0937	Bl-vent Shear	150 ± 20			on H <sub>2</sub> O	
F 0950	Bl-vent Shear	37				
	Wedgetail	3			on H <sub>2</sub> O	
P 1004	Bl-vent Shear	12			light	
1004	Tern sp	1			on H <sub>2</sub> O	
P 1006	Oceanodrom	12			on H <sub>2</sub> O	
1010						
1020	R-F Booby	1			C/C 195°	
1030-1145					1/2 year	
1206					Sea Obs on Station	
1236	BL-Fa Bo	4			Underway 185°	
1245					adult	
1252	BL-vent Sh	2			Turtle(1)	
1305	Heard's SP	1				
1310	Red Phala	1				
1311	Phalarope	2				
1330	BL Storm Pt	2				
	Heard's SP	1				
1335	Red Phala	1				
1339	Bl-v Phala	1				
1340	Red-Phala	2				
1344	Phala	3				
1346	Pan Jaeger	2			light	
1347	Shan Pt	2				
1348	Pana Jaeger	1				
1348	Phalarope	3				
F 1351	Wedgetail	7			light on H <sub>2</sub> O.	
1358	Red Phala	2				
1440	Phalarope	4				
1443	Oceanodrom	4				
1459	Tern sp	1				
F 1504	Phalarope	7			on H <sub>2</sub> O	
1530-1700						
1721					on Station Break	
1726	Phalarope	4			Underway	
1727	Red Phala	1				
1737	Wedgetail	2			light	
1745	Cliff Swallow	1			Imm.	

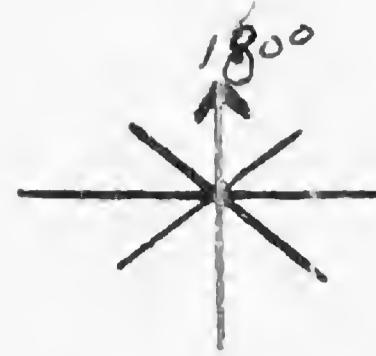
SI-MNH-958e  
7-28-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

DATE 15 Sept 1967  
Pg. # 3



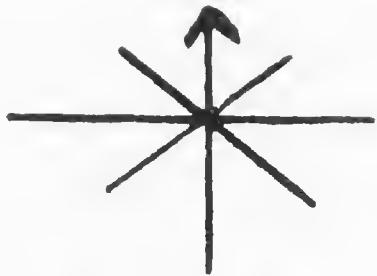
SI-MNH-958e  
7-28-64



SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

DATE 16 Sept 1967  
Pg. # 1

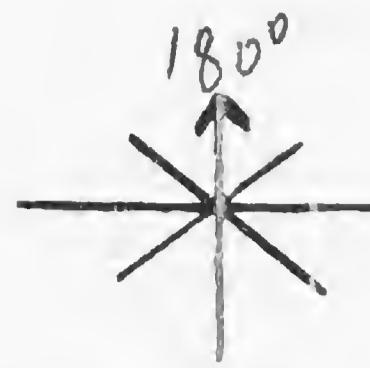
time	species	#	dir.	hgt.	remarks	loc.
0558						
0620	Storm Pet	2			Sunrise	
0622	Storm Pet	1				
0625	Rcd-F Boddy	1			1st year	
0639	Tern sp	1				
0640	Oceanodroma	2				
0650	Oceanodroma	2				
0652	Bl STom Pet	1				
0700	Bl-Face Boot	1			following ship	
0706	Oceanodroma	3			adult.	
0707	Wedgetail	1			light	
0714	Road's SP	1				
0715	O. Tethys	2			Feeding on ship's garbage.	
	Bl Stom Pet	1				
0720	Bl-Face Boddy	2				
0723	Oceanodroma	4			adult.	
0730	Oceanodroma	2				
0732	Phalarope	1				
0736	Kerm. Petrel	1			light	
0750	Bl-Face Boddy	1				
0756	Manx Shear.	1				
0808	O. Tethys	1				
0808	Red Phala	1				
0813-18					Rain	
0828	O. Tethys	1				
0830	Shear Pet	1				
0843	Oceanodroma	1				
0852	Oceanodroma	2				
0853	Boddy	3				
0855	Kerm Pet	1			dark.	
0913	Bl Stom Pet	1				
0914	O. Tethys	2				
0935	Bl-Face Boddy	1			adult	
0954	Red Phala	1				
1002	Friggallid	1				
1013	Bl-face Bo	3			adult.	
1030-	1200					
1205					Break On Station	
1215	Jaeger	1			Underway	
1218	O. Tethys	1				
1259	O. Tethys	2				
1300					Rain	
1308	Red Phala	1				



DATE 16 Sept 1961  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1348	Shorebird	4				
1405	Oceanodroma	2				
1420	Wedgetail	1				
1425	Green Heron	1			light	
1455	Oceanodroma	1			Imm. landed thrice	Bravo - 6
1525	Tern Pet	2			Dark	W 73 - 1
1540						Bravo 1
1600-1715					Rain & Fog	6 Nov 1
1725	Barn Swall	1			Leave Obs. on station.	
1730	Oceanodroma	3			Imm. collected	11-2
1733	Shear-Pet	1				
1756					Underway.	
1808					Sunset	11-1

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7-28-64



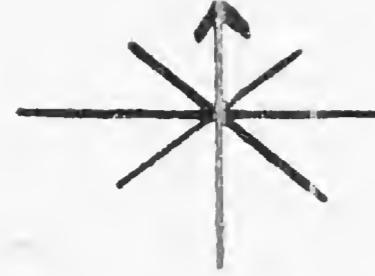
SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

DATE 17 Sept 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0558					sunrise	
0620	Bl-face Booby	1			subadult	
0622	Bl. Storm P	1				
	Oceanodroma	1				
0625	R-F Booby	1				
0635	Shear-Pet	1			1st year	
0645	Red-bill Trop	1				
0653	Bl-Face Booby	1			adult	
0726	Shear-Pet	1				
0745	Oceanodroma	1				
0800	Bl-face Boob	1				
0814	Bl-FauBoob	3				
0815	Artic Tern	1			Imm	
0818	Bl. Stormpet	1				
0845	Shear-Pet	1				
0845	Oceanodroma	1				
0856	Shear-Pet	1				
0912	Bl. Stormpet	1				
0918	Shear-Pet	1				
0928	Nor Phala	1				
0930	Bl-face Boob	1				
1006	Phalarope	1			adult	
1013	O. Tethys	1				
1029	Kenn Pet	1				
1030	1200					
1226	Pint. f Shear	1	SE			
1245	Shear-Pet	1	SE			
1252	Phalarope	1				
1301	Red Phala	1				
1325	Red Phala	1				
1328	Pint. f Sh	2	SE			
1337	Pint. f Sh	1	SE			
1356	Red Phala	1				
1357	Oceanodroma	1				
1403	Artic Tern	1	SE			
1422	Pint. f Sh	1	SE			
1428	Bl. Storm P	1	SE			
1435	Phalarope	2				

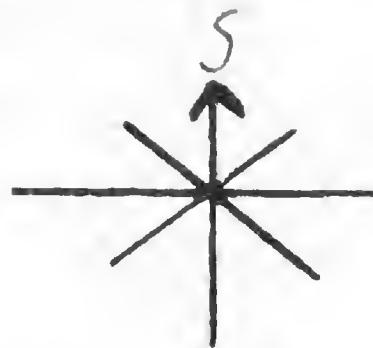
SI-MNH-958e  
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SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E



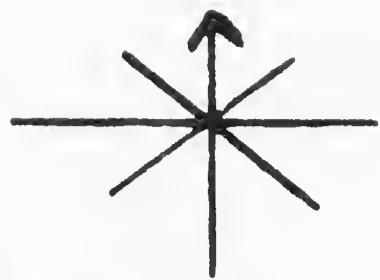
DATE 17 Sept 1967  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1455	Phalarope	2				
1457	Shear-Pet	1				
1459	Oceanod	1				
1503	Shear-Pet	1				
1504	Red Phala	1				
1510	Pink-f Sh	1	SE			
1516	Pink-f Sh	1	SE			
1520	Pink-f Sh	1	SE			
1531	Red Phala	3				
1557	Shear-Pet	1				
1600-1700					Break on station	
1715	Phalarope	1				
1718	Shear-Pt	1				
1723	Pink-f Sh	1				
1730	Pink-f Sh	1	SE			
1733	Pink-f Sh	1	SE			
1738	O. t. t. l. y. g.	1	SE			
1743	Bl Stumpet	3				
1748					Underway	
1758	Shear-Pt	1				
1807					Sunset	



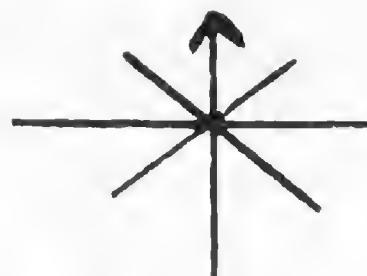
DATE 18 Sept 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0558						
0615	R-F Booby	1				
0635	Shear-Pet	1				
0640	Wedgetail	3				
0648	Wedgetail	1			light.	
0648	Oceanodram	1			light	
0700	Oceanodram	1				
0705	Oceanodram	1				
0728	Leach's SP	1				
0732	Wedgetail	1				
0735	BL Stamp	1			light	
FF 0800	Frigate	2				
	Booby Tern	150+25				
	Antic Tern				Activity feeding.	
0808	Pink-Fish	1				
0809	Phalarope	3	SE			
0822	<del>Red</del> Tern	2				
0823	Phalarope	2				
0836	Pink-Fish	1	SE			
0850	Red Phala	1	SE			
0855	Red Phala	1	SE			
0903	Phalarope	2	SE			
0935	Frigate	1				
0943	Phalarope	2	SE			
0950	Wedgetail	1			light feeding	
1000	Red Phala	1	SE			
1006	Red Phala	1	SE			
1012	Phalarope	2	SE			
1030	1330				Breeding. Underway 1850	
1331	Red-F Booby	1				
1340	Oceanodram	1				
1341	Frigate	1			1st year	
1400	13				SE 72	
SF 1512	Frigate	1				
	Bl-Face Booby	1				
	Red-F Booby	1				
	ARTIC Tern	1				
	Sooty Tern	25+3				
1539	Pink-Fish	2	SE			
1549	Leach's SP.	1				
PF 1558	Sooty Tern	120+10			adult Feeding.	
	ARTIC Tern	1				
	Red-FooB	8			13rd 9 1st year	



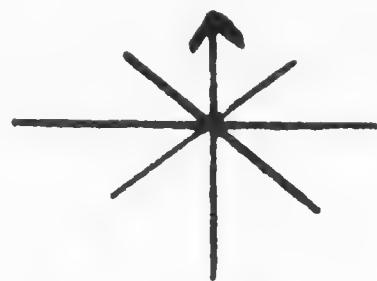
DATE 18 Sept 1967  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1600-1700					Break on station.	
1743						
F 1745	Red-F Boddy	13			Underway	
1746	Shear-Pet	1			Subadult in H <sub>2</sub> O	
1806					Sunset.	



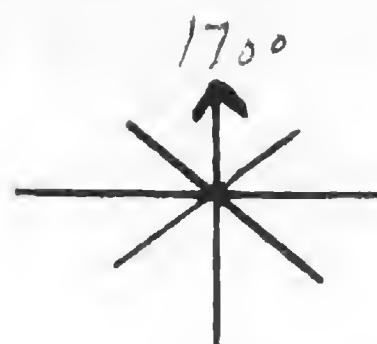
DATE 19 Sept 1967  
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
1245	R-F Booby	3			light Ph ad	
1248	O.Tern	1				
1300						
1302	Kem Pet	1				
1306	Audubon's Sh	1				
1309	<del>B. m. k. h.</del>	1				
1310	Sooty Tern	1			Ad	RT B-29
1325	Sooty Tern	2			ad	RT B-29
1335	R-F Booby	1			Ad Brown Phare	RT B-29
1348	Sooty Tern	1			ad	RT B-29
1349	Shear Pet	1				
1350	c Tern	1				
1356	R-F Booby	2				
1357	Sooty Tern	1				
1358	Frigate sp	2				
1400						
1405	R-F Booby	1			stop	ST-37
1408	Shear Pet	1			ad Dark ph	ST-37
1409	Bl-fac Boob	2			ad	ST-37
1410	Sooty Tern	1			ad	ST-37
1416						
1426	Oceanodar	4			Underway 155°	OB B-10
1427	Shear Pet	1				
1428	<del>R. B. m. k. h.</del>	1				
1434	Audubon's Sh	1				
1436	<del>B. m. k. h.</del>	1				
1437	Shear Pet	1				
1438	Bl-fac B	2			Adult	
1443	Sooty Tern	3			adult	
TF 1447	R-F Booby	12	SE			
TF 1450	Sooty Tern	21	SE		Towards Is/a	
					!!	
					!!	
1503	Sooty Tern	3			adult	
1514	Audubon's S	1				
1516	Audubon's S	1				
1518	Audubon's S	1				
1519	Sooty Tern	1				
1520	Sooty Tern	2			Adult	
1525	Sooty Tern	2				
TF	R-F Booby	5			Y At Da Jr. Ph 13A	
	B-Fac Booby	3	SE			
1530	Audubon's S	2			TF Adult	
1531	B-Fac Booby	3			Adult	
1531	Shear Pet	1				



**DATE** 1987-1967  
**Pg. #** 4

time	species	#	dir.	hgt.	remarks	loc.
5P 1543	sooty Tern	33				
1545					41,110 <sup>2</sup>	
1549	friggett	1				
1600					Leave 065 - On station - off Labradorian Still on station at sunset.	



DATE 20 Sept 1967  
Pg. # 1

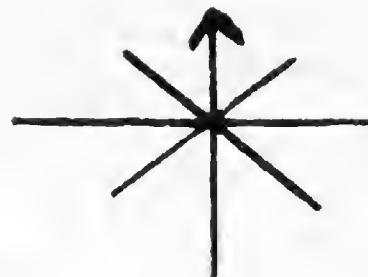
time	species	#	dir.	hgt.	remarks	loc.
0559					Sunrise	
0632	DR-Petrel	1			All Waved Albatross are adults.	
0633	Andulanss	1				
0633	bird	1				
0640	D-r Petrel	1				
0640	Andulanss	1				
0653	Stethys	1				
0703	Stethys	1				
0712	Swal-T Gull	2				
0718	Andulanss	2				
0723	Swal-T Gull	2				
0724	Red-Bill Trop	1				
0738	Bl-Foot Boob	1			on the	
0739	Shear-Pet	1				
0739	Red-bill Tropic	1			adult	
F 0745	Swal-T Gull	8				
0750	Waved Alba	1			NH20	
0753	Swal-T Gull	4				
0758	Waved Alba	1			alone	
0815	Waved Alba	1			alone	
TF 0823	Bl-foot Body	22	S		stop	
0825	D-R Petrel	1				
0829	Bl-foot Body	3			Movie Adult	
0833					Underway	
0834	Oceanodrom	3				
0834	Phalange	1				
0842	Waved Alba	1				
0845	Mag Frig	1				
0845	Andulanss	1			Ado	
TF 0850	Bl-Foot Body	8	NW		Adult	
F 0903	Bl-foot Body	5			on NH20-Adult	
0905	D-r Petrel	1	W			
0906	Bl-foot B	10	N		Adult	
0906	Jaeger	1				
0910	D-r Petrel	1	W			
0911	D-r Petrel	1	W			
0918	D-R Petrel	1	W			
0919	Phalange	1				
0922	Bl-Foot Body	1			adult Movie	
0923	B-Foot Body	1			Immature	
0924	Bl-face B	1				
0925	Stethys	1			ad	
TF 0931	Bl-Foot Body	10	S		2 Ad Imm	



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Pg. # 2

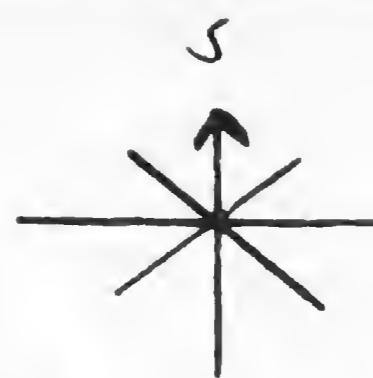
time species # dir. hgt. remarks loc.

0934	Swallow-Tail Gull	1		Ad	
0935	Bl. foot B	3		2 Ad 1 imm	
0940	Bl. foot B	2			
0941	Waved Alba	1	E		
0942	Waved Alba	1	E		
0948	Wave Alba	1	E		
0949	Andean Sh	1			
0950	Swallow-Tail Gull	2			
0953	Bl. foot Booty	1			
0953	D-R Petrel	3	S		
0957	Andean S	1		Movie	
1002	Waved Alba	1			
1004	O. tethys	2		on the o	
1007	Mag. Frig.	1			
1018	Waved Alba	1		Ad ♂	
1018	Shear-Pet	1	E		
1019	D-R Petrel	1	E		
1025		1	E		
1028	D-R Petrel	1		Sea lion or seal (1)	
1029	D-R Petrel	1			
1030				Stop for station	49
1035	Waved Alba	1			
1036	D-R Petrel	1			
1040	O. gracilis	2		feeding movie	
1045	O. tethys	2			
1047	Bl. foot Booty	2			
1125				Seal? or Sea Lion.	
1153	Waved Alba	1		Movie	
1153	D tethys	1			
1154	Mag. E night	1		Ad ♀	
1155		1			
1202	Bl. foot Booty	1			
1204	Swallow-Tail	1		Imm.	
1208	<del>Black</del> Skua	1			
1208	Bl. foot Booty	1		During BFB	
1208	Waved Alba	2			
1234	D-R Pet	1			
1256					
1257					
1302	Bl. foot B	3		Underway 170°	
1304	Bl. foot B	1		3 gearheads	
				ORA 20	



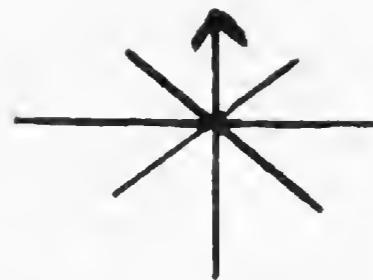
DATE 20 Sept 1967  
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
1314	Phalarope	4				
1314	Bl. Foot Boob	3				
1325	Waved Alba	1				
1337	Bl-face Boob	1			Adult	
1342	Swallow-Tail	2				
1343	Mag Frig	7				
1343	Waved Alba	1			Ad ♀	
1346	Waved Alba	1			on H2O	
1354	Bl. foot Boob	2				
1354	Swallow-Tail	1				
1358	Sur-Tail Gull	4				
1400						
TF	Phalarope	9	E		Ad on H2O Movie Stop underway.	
1413						
1415	D-R Petrel	1				
1415	Waved Alba	1				
1418	Waved Alba	1				
1426	D-R Petrel	1				
1432	Bl. foot Boob	1				
1436						
1452	Waved Alba	1			Sea? a Seabird.	
1453	Waved Alba	1				
1454	Phalarope	1				
F	1456	Bl. Foot Body	9		on H2O.	
F	1505	Bl. Foot Body	11			
	1512	Waved Alba	1		on H2O	
	1514	Bl. foot Body	3			
	1517	D-R Petrel	1		2 ad 1 imm.	
	1523	Mag Frig	1			
	1525	Waved Alba	1		Ad ♀	
	1539	Waved Alba	1			
	1539	frigate	3			
FF	1545	D. gracilis	11		Feeding on Nut Slick	
	1546	Sur-Tail G	2			
	1546	Nor Phal	1		ad.	
	1556	Waved Alba	1			
	1556					
	1559	Bl. foot Boob	3		3 Sea lion.	
	1600					
FF	1605	D. gracilis	5			
	1630	705			Stop	
					Feeding Movie	
	1716	D-r Petrel	1		Break	
TF	1716	Bl. ft Body	7	SE	To island	
TF	1717	Bl. ft Body	12	SE		
	1746					
TF	1750	Bl. foot Boob	24	E	underway	
	1805				Sunset	



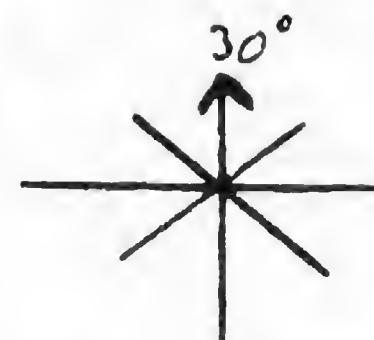
DATE 21 September 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0559					Scanning	
0638	O. gracilis	1				
0639	Storm Pet	1				
0647	Storm Pet	2				
0708	Bl. face Boob	1	NE		Adult	Arctic 1
0728	Frigate sp	1				Volley 2
0729	Shear-pet	1				Frig. 1
0740	Kerm Petrel	1				Storm 3
0803	O. markhami	1			Dark	Bl. face 7
0803	D-R Petrel	1				Frigate 4
0814	O. markhami	1				3-p. 2
0815-3						
0835	Red Phalarope	1			Stop	
0849	O. markhami	1				
0913	D-R Petrel	1				
0925	Kerm Pet	1			Dark	Kerm 2
0930	O. markhami	1				Mark 8
1003	Red Phalarope	1				DRP-9
1018	O. markhami	1				RP-5
1025	D-R Petrel	1				
1029	D-R Petrel	1				
1030-1200		1				
1218	Frigate	1			Stop for Position Change	43
1242	Bl. Face Boob	1				Begin Towat 1,000
1252	Red Phala	1			Adult	
1253						
1307	Red Phala	2			Underway.	
1316	Bl. Face Boob	1			Adult	
1323	O. Tethys	1				
1347	Frigate	1				
1355	Shear-pet	1			Adult	
1359	Bl. Face Boob	2				
1400					Stop	
1410	Bl. face Boob	1			Adult	
1411	D-R Petrel	1				
1411	O. markhami	1				
1413						
1428	Arctic Tern	1			Underway.	
1434	Bl. Face Boob	1			Adult	
1445	O. Tethys	1				
1458	O. markhami	1				
1512	D-R Petrel	1				
1534	D-R Petrel	1				
1546	O. markhami	1				
1600-1730					Break	
1746					Underway	
1800	D-R Petrel	2				
1804					Sunset	



DATE 22 Sept 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0630						
0645	O. murchisoni	1			Begin to fly 0621	DRP-9
0655	O. leuconotos	1				S-P-2
0705					BL line seen.	
SF 0708	Arctic Tern	7	S			BL-6
	Arctic Tern	6			feeding	
0755	Red Phalarope	1			Scanning	Marl-2
0800	O. tethys	1			Stop	Red S-1
0816	O. tethys	1				
0907	Shear-Pet	2				AT-17
0921	Phalarope	1				PT-1
0934	D-R Petrel	1				R Ph-22
0950	Storm Petrel	2				
0955	D-R Petrel	1				Phala-2
1005	D-R Petrel	1				
1011	O. tethys	1				BFB-4
1030	1230	5				
1243	Phalarope	1			Break to station <del>at 1230</del> at 1230 c. 25°	
1250	Storm Pet	1				Storm-3
1251	O-R Petrel	1				
1306	Arctic Tern	1	SE		Feeding	Frig-1
1330	Red S-T	1				AT-1
1334	BL-Face B	1			Adult	
1354	O. tethys	1				
1400	D-R Petrel	1				
1403	BL-Face B	2				
	Frigate	1			Feeding.	
1420	O. murchisoni	1				
1420	D-R Petrel	3				
1445	O. tethys	1				
1507	Kermadec Pet.	1			Light.	
1526	O. tethys	1				
TFF 1531	Arctic Tern	6	SE		Oceans ploughing into water.	64
F 1534	Red Phalarope	21			in the air	90
1545	Drump Pet	1				
1549	O. tethys	1				
1551	D-R Petrel	1				
1630					Leave observations.	13



DATE 23 Sept 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
------	---------	---	------	------	---------	------

0800						
0805	Cape Pigeon	2			Begin	
0827	Shear Pet	1			Maine one followed for 65 min - fed one dead squid in H2O	
0833	D-R Petrel	1				
0836	O. marsham	1				
0838	Phalarope	3				
0902	Storm Petrel	1				
0908	D-R Petrel	1				
0914	Oceanodroma	1				
0915	O. marsham	1				
0923	Whimbrel	1				
0950	O. tenuirostris	1				
1003	Brigata	1				
1020	O. marsham	1				
1032	O. tenuirostris	2				
1032	D-R Petrel	1				
1037	Storm Petrel	1				
1043	Swallow	1				
1043	Bl-Face Boob	1			adult	
1055	O. tenuirostris	1				
1059	O. marsham	2				
1059	D-R Petrel	1				
1100						
1200					End of Assessme	
1205	Storm Pet	1				
1210	D-R Petrel	1				
1231	Storm Petrel	2				
1232	Red Phalarope	2				
1237	D-R Petrel	1				
1251	O. tenuirostris	1				
1253	O. marsham	3				
1413	Phalarope	2				
1414	O. marsham	1				
1414	Red Phalarope	2				
1423	Red Phalarope	2				
1427	Red Phalarope	2				
1431	Red Phalarope	3			Partial Breeding Plumage	
1434	Bl-Face Boob	1			on H2O	
1455	Red Phalarope	1			adult	
1510	D-R Petrel	1				
1525	Bl-Face Boob	1				
1537	Red Phalarope	4				
1550	O. marsham	1				
1555	Cape Pigeon	1				
1600	Red Phalarope	1				
1611	O. tenuirostris	1				
1614	O. tenuirostris	1				
1626	D-R Petrel	1				
1635	Red Phalarope	4				
	Red Phalarope	4				

Cape-3

SP-1

DRP-9

Mark-10

Ocean-1

Wade-1

Storm-5

Telphy-6

Fin-8-1

Swallow-1

BB-3

RP-23

Wade-5

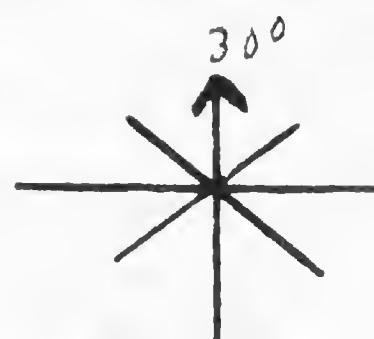
69

Ad on H2O



DATE 23 ~~23~~ Sept 1967  
Pg. # 2

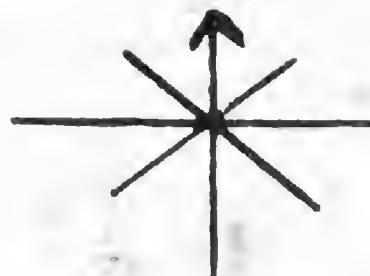
time	species	#	dir.	hgt.	remarks	loc.
1635	D-R Petrel	1				DRP - 4
F 1636	Red Phalarope	12			on the	RP - 12
1642	P. R Petrel	1				RP - 2
1645	O. marshani	1				
1645	D-R Petrel	1				
1655	Bl-Face Bob	1				Bl-B - 1
1656	D-R Petrel	1				
1659	O. marshani	1				
1700					Cave Obs.	19



DATE 24 August 1967  
Pg. # 1

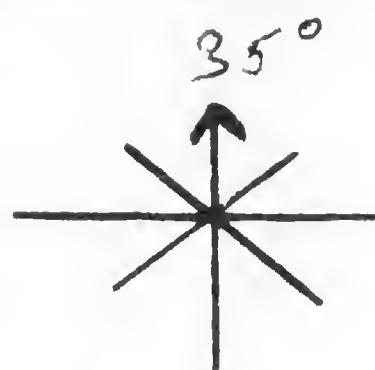
time	species	#	dir.	hgt.	remarks	loc.
0815						
0825	O. markhami	1				
0844	R-Fo. Booby	2				
0845	R-Fo. Booby	1				
0855	BL-Face Booby	1				
0853	R-Fo. Booby	1				
0855	O.Tethys	1				
0857	Shearwater	1				
0900	O. markhami	1				
O. carbo?						
0900	<del>O. markhami</del>	1				
0913	<del>O. g. macroura?</del>	2				
0928	R-Fo. Booby	1				
0941	<del>Red-Footed Booby</del>	1				
0944	Pink-Footed Booby	2	SE			
FF	R-F. Booby	17	E		Ad Dark	
	BL-F. Booby	5				
	Frigate	11				
	O.Tethys	2				
	Waved Albatross	1				
1011	BL-Face Booby	1				
1011	D-R Petrel	1				
1017	Cape Petrel	1				
1019	Antarctic Petrel	1				
1026	Jaguar Parrot	1				
	Long-Tailed Shearwater	1				
	Storm Petrel	1				
1036	<del>Red Phalarope</del>	1				
1046	Red Phalarope	1	SE			
1052	<del>Pink-Footed Booby</del>	1				
1102	D-R Petrel	1	SE			
SF	<del>Tern</del>	5	O			
	1115-1230				Break	
	Shearwater	1	SE			
	D-R Petrel	1	SE			
	Arctic Tern	4				
	Red-F. Booby	2				
	Frigate	11				
	R-F. Booby	5				
	Arctic Tern	4				
	D-R Petrel	1				
	1312	3				
	Frigate	3				
	1318	3				
	Frigate/May	3				
	1323	1				
	Swallow-tail	1				
F	1330	5				
	Red Phalarope	5				
	O. carbo?	1				
	1332					
	Arctic Tern	3				
	1335	1				
	D-R Petrel	1				
	1401	1				
	O-R Petrel	1				
MF	1407	1				
	O. markhami	1				
	<del>Stompa</del>	4				
	6-Tethys	1	O			

N E



DATE 24 Sept 1967  
Pg. # 2

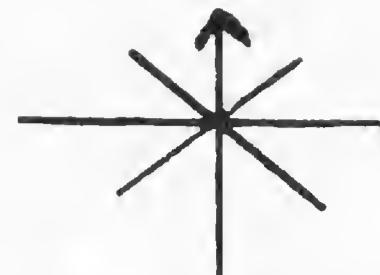
time	species	#	dir.	hgt.	remarks	loc.
1432	D-R Pet	1	SE		Move	
1433	D-R Pet	1	SE			
1434	Artic Tern	4				
PP 1434-455	Frigate Booby	50			<del>Scat</del> Distant some feeding over Yellow-fin Tuna	
1456	O. Tethys	1			School	
1510	O. murchisoni	1				
1515	D-R Petrel	1	SE			P-18-10
1517	Pink f Sh	1	SE		Move	
1518	Stann Pet	3			Move	
1537	D-R Petrel	1	SE			
1552	O. murchisoni	1				
1603	Phalarope	1	SE			
HF 1604	Artic Tern	5				
1610	Shear-Pt	1				
1610						
1611	Frigate	1	SE		Whale spout.	
1614	Pink f Sh	1	SE			
1617	Shear f Sh	1	SE			
1618	Shear f Sh	1	SE			
1626	O. Tethys	1	SE			
1630	1715	1	C			
1720	Pink f Sh	1	SE		Break	
1728	R. foot Booby	2				
1745	R. foot Booby	8			Dark phase ad.	
	BO-face Boob	9				
F 1800-	frigate	11			7 ad 15 A Dark phase } on the	
15	frigate	22			adult } Over Tuna Yellowfin? Diving flock	
	booby	5			Distant	
1815					Milling little feeding Tuna breaking Leave observations surface	



DATE 25 Sept 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0830					Begin	
0831	BL ST Pet	2				
0845	Shear-Pet	1				
0946	Bird	1				
0950	Pelargone	4	SE			
0957	Phalarope	3	SE			
1012	O. Tethys	2				
1027	Phalarope	2	SE			
1030	O. Tethys	1				
1055	BL STom P	3			following ship	
1055	O. tethys	2				
1105	Bl-face Boob	2			adult	
1112	Pom Jaeger	1			light Phase	
1130	1300					
1131	Stom P	2				
1319	Bl-face B	1				
1327	O. tethys	1				
1349	Bl-Faced	1				
1352	Red-Bill Trop.	2			ad Fed once	
1355	Bl-face Boob	1	E		ad	
1400	1300					
1502	Bl-face Booby	1			ad Break while on station.	
1514	Bl-Face Boob	1			adult	
1520		1			adult	
1531		1			1 Turtle	
1549	Red-F Booby	1				
1555	Red-F Booby	1				
SF	Bl-Face Boob	1			adult	
1600	Bl-face Boob	8			Some Feeding, adult	Two groups of Blue-face flying
1605	Bl-face Boob	1				east (one in area, others saw
	Shear	1				
	Wedgetail	2			adult light phase	skip (skipjack) breaking surface
	Sooty Tern	3			adult	Boobies in H2O feeding then No diving
	Arctic Tern	6				skip. Two minutes later other birds
	Mag Frigate	3			Ad or	came flying by. Appeared to be diving
WF	Wedgetail	10			2 Dark - 8 light	for school but none seen feeding.
	Pom Jaeger	1			light	
1618	R-F Booby	1				
SF	R-F Booby	1			Adult Dark Phase.	
	Wedgetail	3				
	Sooty Tern	3			2 Light 1 Dark Over fish (skipjack?) No feeding.	
F	1625-30	Sooty Tern	40		2 ad 1 imm	
	Bl-face Booby	18			37 Ad 3 Imm Over fish Boobies only feeding	
	Wedgetail	11			adult	
	Red-F Booby	1			1 Dark 10 Light Skipjack One caught	
	Kings-T Jaeger	1			1st year	
	Pom Jaeger	3			2 copulating Turtles.	
1625	BL Face Poot	25	±5		Adult. Feeding	
FF	Sooty Tern	15	±5		Not feeding. Over fish.	
1650	Bl-face Booby	3	W		adult	
1651	Bl-face Booby	2	W		adult	
1655	Wedgetail	1			light	
FF	Bl-face Booby	10			adult Feeding.	
1715						





DATE 25 Sept 1967  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1716	Storm Petrel	1				
1716	W. Sooty Tern	1				
MF 1717	Storm Petrel	1				
	Bl.-face Booby	5				
	Frigate	2				
	Sooty Tern	25-25				
	Glauc-Pet	3				
1725	Bl. Storm Petrel	2			Following ship.	
1730	Tern up	4				
1755	O. Tethys	1				
1759	Shearwater	1	SE			
1810						
1815						

~~1000 m. up to 1000 m. with 1000 m. of fish.~~  
~~Not by a school of fish.~~  
Milling over skipjack school.

Lagenorhynchus?  
50+10 Delphids. Including young. Headed W

Leave obs.



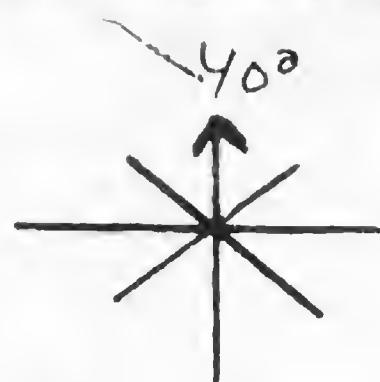
5' +

Brownish 1- Small  $\Delta$  fin  
or light 2- Snout present  
Gray 3- Deep gray  
4- Small area of  
belly lighter  
gray or brownish

Jumped clear of water.

5- Short and chunky  
in appearance

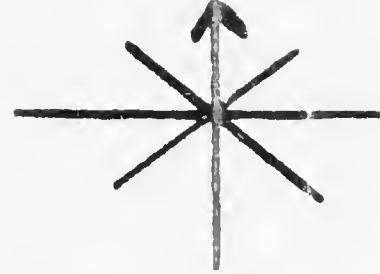
1000 m.  
EFG



Sept 1969  
DATE 26 Sept  
Pg. #

time	species	#	dir.	hgt.	remarks	loc.
0745						
0823	Bl. Petrel	3			Begin 065	
0823	O. Tethys	3			Following, sligh	
0835	Bl. Tern	1	E		"	
SF 0840	O. Tethys	12	O			
0840	O. Castro	1				
0908	O. Tethys	4			following, sligh	
SF 0917	Bl. Sooty Pet	2			" " "	
0945	O. Tethys	12				
0959	O. Castro	1				
1013	O. Tethys	3				
1045	Bl. Tern	1	SE			
1125	Nighthawk	1			Brake	
1225					Turtle (1) also Day 180 Sooty Pet caught	
1235						
1257						
1306	Pareinias	2				
1325	Colomb. Booby	1			Ad ♀	
1340	Shear Pet	1				
1345	Br. Booby	1				
1441	Barn Swallow	1			Brake	
1518	Br. Booby	3				
1530	Bl. Tern	4				
FF 1535	Br. Booby	10				
	Can Noddy	8				
	Sooty Tern	6				
	Bl. Tern	25+				
FF 1550	Can Noddy	8			feeding	
1 1630						
FF 1645	Can Noddy	30+			8 Pilot Whales - 15±2 Turners	
	Br. Booby	6				
	Bl. Tern	3			Feeding tog in water Fish jumping.	
MF 1708	Shear Pet	3				
1710	O. Tethys	5				
1714	Bl. Shear Pet	1				
1726	O. Tethys	3			One Turtle.	
1730						
FF 1742	Frederick's	5			6 Pilot Whales - 12 Turners	
1745					Paddling over water surface like stamp peded.	
					(Geech's) End of Trip.	

SI-MNH-958e  
7-28-64



SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA DAILY LOG -- E

# NOCTURNAL

DATE 25 August 1967  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
2230					Begin Obs - On Station Overcast w Rain	
2245	Pterodroma	1				
2315	Wh-faces P	1			Flw Almond Collected. Gone ss.	
2330						

Date 7 August 1967Ship Undeemed ( )

Cruise No. \_\_\_\_\_

Organization \_\_\_\_\_

Recorder \_\_\_\_\_

Sunrise: Time \_\_\_\_\_

Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Sunset: Time \_\_\_\_\_

Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 42

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

## Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
------	----------	-----------	-----------	----------	-----------	-----------

0100						
0200						
0300						
0400						
0500						
0600	8°02'N	79°44'W				
0700	7°54'N	79°40'W				
0800	7°43'N	79°49'W				
0900	7°31'N	79°53'W				
1000	7°22'N	80°02'W				
1100	7°15'N	80°12'W				
1200	7°10'N	80°23'W				
1300	7°07'N	80°32'W				
1400	7°04'N	80°43'W				
1500	7°01'N	80°54'W				
1600	7°00'N	81°05'W				
1700	7°01'N	81°14'W				
1800	7°01'N	81°26'W				
1900						
2000						
2100						
2200						
2300						
2400						

Organization \_\_\_\_\_ Recorder \_\_\_\_\_

Sunrise: Time \_\_\_\_\_ Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Sunset: Time \_\_\_\_\_ Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = \_\_\_\_\_

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.			
2.			
3.			
4.			
5.			

### Hourly Positions:

<u>Time</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Wind Dir.</u>	<u>Wind Sp.</u>	<u>Wave Dir.</u>	<u>Wave Hgt.</u>
0100						
0200						
0300						
0400						
0500						
0600	8° 09'N	83° 19'W				
0700	8° 15'N	83 29				
0800	8° 22'N	83° 40'W				
0900	8° 27'N	83° 50'W				
1000	8° 33'N	83° 58'W				
1100	8° 39'N	84° 07'W				
1200	8° 45'N	84 6				
1300	8° 51'N	84° 25'W				
1400	8° 57'N	84° 21'W				
1500	9° 04'N	84° 44'W				
1600	9° 11'N	84° 53'W				
1700	9° 17'N	85° 02'W				
1800	9° 23'N	85° 11'W				
1900	9° 29	85° 20'W				
2000						
2100						
2200						
2300						
2400						

Date 9 August 1967 Ship ( ) Cruise No.

Organization  Recorder

Sunrise: Time  Position: Lat. , Long.

Sunset: Time  Position: Lat. , Long.

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 80

Miles travelled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
------	----------	-----------	-----------	----------	-----------	-----------

0100						
0200						
0300						
0400						
0500						
0600	10° 47' N	87°				
0700	10° 54' N	87° 23.5' W				
0800	11° 01' N	87° 23.5' W				
0900	11° 08' N	87° 38.5' W				
1000	11° 15' N	87° 46' W				
1100	11° 22' N	87° 53.5' W				
1200	11° 28' N	88° 01' W				
1300	11° 35' N	88° 10.5' W				
1400	11° 41' N	88° 20' W				
1500	11° 48' N	88° 28.5' W				
1600	11° 55' N	88° 36' W				
1700	12° 02' N	88° 40' W				
1800	12° 09' N	88° 48.5' W				
1900	12° 16' N	89° 07' W				
2000						
2100						
2200						
2300						
2400						

Date 15 August 1967 Ship \_\_\_\_\_ ( ) Cruise No. \_\_\_\_\_

Organization \_\_\_\_\_ Recorder \_\_\_\_\_

Sunrise: Time \_\_\_\_\_ Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Sunset: Time \_\_\_\_\_ Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 96

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400						
0500						
0600	13° 18' N	90° 47.6' W				
0700	13° 25' N	90° 58' W				
0800	13° 32' N	91° 08.4' W				
0900	13° 39' N	91° 16.8' W				
1000	13° 46' N	91° 25.2' W				
1100	13° 53' N	91° 32.6' W				
1200	14° 01' N	91° 50' W				
1300	14° 07' N	92° 02' W				
1400	14° 14' N	92° 14' W				
1500	14° 30' N	92° 25' W				
1600	14° 26.6' N	92° 29.7' W				
1700	14° 33.2' N	92° 34.4' W				
1800	14° 40' N	92° 39' W				
1900	14° 46.6' N	93° 43.7' W				
2000						
2100						
2200						
2300						
2400						

Organization Recorder

## Recorder

Sunrise: Time \_\_\_\_\_ Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Sunset: Time \_\_\_\_\_ Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 37.1

Miles travelled from sunset to 2400 hours =

TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.			
2.			
3.			
4.			
5.			

## Hourly Positions:

<u>Time</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Wind Dir.</u>	<u>Wind Sp.</u>	<u>Wave Dir.</u>	<u>Wave Hgt.</u>
0100						
0200						
0300						
0400						
0500						
0600						
0700						
0800						
0900						
1000						
1100						
1200	Salina Cruz					
1300						
1400						
1500	15° 58' N	95° 20' W				
1600	15° 54' N	95° 30' W				
1700	15° 50' N	95° 40' W				
1800	15° 46' N	95° 50' W				
1900	15° 43' N	96° W				
2000						
2100						
2200						
2300						
2400						

Date 13 August 1967 Ship \_\_\_\_\_ (\_\_\_\_\_) Cruise No. \_\_\_\_\_

Organization \_\_\_\_\_ Recorder \_\_\_\_\_

Sunrise: Time \_\_\_\_\_ Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Sunset: Time \_\_\_\_\_ Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 60

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400						
0500						
0600						
0700	15° 55' N	98° 12' W				
0800	15° 57' N	98° 23' W				
0900	15° 59' N	98° 34' W				
1000						
1100						
1200	16° 02' N	98° 40' W				
1300	16° 08'	98° 48'				
1400	16° 14' N	98° 59' W				
1500	16° 19' N	99° 09' W				
1600	16° 24' N	99° 18' W				
1700	16° 29' N	99° 27' W				
1800	16° 34' N	99° 37' W				
1900	16° 39' N	99° 46' W				
2000						
2100						
2200						
2300						
2400						

Date 16 August 1967 Ship Unlaunched (33) Cruise No. 1

Organization POAIS Recorder \_\_\_\_\_

Sunrise: Time \_\_\_\_\_ Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Sunset: Time 1906 Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 43.6 (~~45.2~~)

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.			49	
4.			49	
5.			49	

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400						
0500						
0600						
0700						
0800						
0900	Accuplca					
1000	16° 50' N	99° 55' W				
1030	16° 45' N	100° 02' W				
1100	16° 39' N	100° 05' W				
1200	16° 29' N	100° 12' W				
1300	16° 21' N	100° 20' W				
1400	16° 14' N	100° 28' W				
1500	16° 14' N	100° 32' W				
1600	16° 14' N	100° 28' W				
1700	16° 14' N	100° 28' W				
1800	16° 14' N	100° 31' W				
1900	16° 10' N	100° 31' W				
2000						
2100						
2200	13° 45' N	100° 54' W				
2300						
2400						

Date 17 August 1967 Ship Undeclared (33) Cruise No. \_\_\_\_\_

Organization POPSA Recorder \_\_\_\_\_

Sunrise: Time \_\_\_\_\_ Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Sunset: Time 1908 Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 71

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.	<u>17</u>			
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400	<u>15°28'N</u>	<u>101°18'W</u>				
0500	↓	↓				
0600	↓	↓				
0700	<u>15°26'N</u>	<u>101°15'W</u>				
0800	<u>15°27'N</u>	<u>101°19'W</u>				
0900	<u>15°26'N</u>	<u>101°27'W</u>				
1000	<u>15°12'N</u>	<u>101°36'W</u>				
1100	<u>15°13'N</u>	<u>101°36'W</u>				
1200	<u>15°13'N</u>	<u>101°36'W</u>				
1300	<u>15°11'N</u>	<u>101°34'W</u>				
1400	<u>15°9'N</u>	<u>101°32'W</u>				
1500	<u>15°N</u>	<u>101°52'W</u>				
1600	<u>14°51'N</u>	<u>102°2'W</u>				
1700	<u>14°51'N</u>	<u>102°02'W</u>				
1800	<u>14°51'N</u>	<u>102°21'W</u>				
1900	<u>14°44'N</u>	<u>102°11'W</u>				
2000	<u>14°33'N</u>	<u>102°13'W</u>				
2100						
2200	<u>14°19'N</u>	<u>102°38'W</u>				
2300						
2400						

Date 18 August 1967 Ship Andaman (33) Cruise No. \_\_\_\_\_

Organization \_\_\_\_\_ Recorder \_\_\_\_\_

Sunrise: Time \_\_\_\_\_ Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Sunset: Time \_\_\_\_\_ Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 96

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400	13° 56' N	103° 01' W				
0500	13° 56' N	103° 01' W				
0600	13° 56' N	103° 01' W				
0700	13° 48' N	103° 12' W				
0800	13° 41' N	103° 21' W				
0900	13° 34' N	103° 24' W				
1000	13° 26' N	103° 26' W				
1100	13° 20' N	103° 27' W				
1200	13° 20' N	103° 27' W				
1300	13° 14' N	103° 33' W				
1400	13° 07' N	103° 41' W				
1500	13° N	103° 49' W				
1600	12° 53' N	103° 56' W				
1700	12° 53' N	103° 56' W				
1800	12° 53' N	103° 56' W				
1900	12° 44' N	104° 03' W				
2000	12° 36' N	104° 09' W				
2100						
2200						
2300	12° 16' N	104° 32' W				
2400						

Organization \_\_\_\_\_ Recorder \_\_\_\_\_

Sunrise: Time \_\_\_\_\_ Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Sunset: Time 19<sup>16</sup> Position: Lat. 10°34'N, Long. 105°06'

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 91

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.			
2.			
3.			
4.			
5.			

### Hourly Positions:

Time    Latitude    Longitude    Wind Dir.    Wind Sp.    Wave Dir.    Wave Hgt.

0100						
0200						
0300						
0400	12° 02'N	104° 46'W				
0500	12° 03'N	104° 46'W				
0600	12° 03'N	104° 46'W				
0700	11° 59'N	104° 54'W				
0800	11° 53'N	105° 04'W				
0900	11° 42'N	105° 04'W				
1000	11° 31'N	105° 04'W				
1100	11° 26'N	105° 04'W				
1200	11° 26'N	105° 04'W				
1300	11° 7'N	105° 03'W				
1400	11° 15'N	105° 03'W				
1500	10° 56'N	105° 05'W				
1600	10° 46'N	105° 08'W				
1700	10° 46'N	105° 08'W				
1800	10° 46'N	105° 08'W				
1900	10° 27'N	105° 06'W				
2000	10° 26'N	105° 06'W				
2100						
2200						
2300	10° 04'N	105° 03'W				
2400						

Organization    Recorder

Sunrise: Time 0651 Position: Lat. 9°23'N, Long. 105°05'W

Sunset: Time 10 6 Position: Lat. 75 4'N, Long. 105° 1'W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 89

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.			
2.			
3.			
4.			
5.			

### Hourly Positions:

<u>Time</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Wind Dir.</u>	<u>Wind Sp.</u>	<u>Wave Dir.</u>	<u>Wave Hgt.</u>
0100						
0200	09°04'N	105°01'W				
0300						
0400	09°01'N	105°05'W				
0500						
0600	09°03'N	105°07'W				
0700	09°02'N	105°06'W				
0800	9°11'N	105°07'W				
0900	9°1'N	105°06'W				
1000	8°50'N	105°04'W				
1100	8°43'N	105°03'W				
1200	8°43'N	105°03'W				
1300	8°07'N	105°02'W				
1400	8°06'N	105°02'W				
1500	8°16'N	105°01'W				
1600	8°07'N	105°01'W				
1700	8°07'N	105°W				
1800	8°06'N	105°W				
1900	7°57'N	105°W				
2000	7°47'N	104°59'W				
2100						
2200						
2300	7°35'N	104°57'W				
2400						

Date 21 August 1967 Ship ( ) Cruise No.

Organization  Recorder

Sunrise: Time 0654 Position: Lat. 6°04'41"N, Long. 104°54'41"W

Sunset: Time 1914 Position: Lat. 5°32'N, Long. 104°56'W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 82

Miles travelled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400	<u>6°56'N</u>	<u>104°54'W</u>				
0500						
0600	<u>6°50'N</u>	<u>104°54'W</u>				
0700	<u>6°43'N</u>	<u>104°53'W</u>				
0800	<u>6°36'N</u>	<u>104°51'W</u>				
0900	<u>6°28'N</u>	<u>104°49'W</u>				
1000	<u>6°19'N</u>	<u>104°48'W</u>				
1100	<u>6°13'N</u>	<u>104°47'W</u>				
1200	<u>6°12'N</u>	<u>104°47'W</u>				
1300	<u>6°08'N</u>	<u>104°49'W</u>				
1400	<u>5°58'N</u>	<u>104°51'W</u>				
1500	<u>5°49'N</u>	<u>104°53'W</u>				
1600	<u>5°39'N</u>	<u>104°54'W</u>				
1700	<u>5°39'N</u>	<u>104°55'W</u>				
1800	<u>5°39'N</u>	<u>104°53'W</u>				
1900	<u>5°26'N</u>	<u>104°56'W</u>				
2000	<u>5°17'N</u>	<u>104°59'W</u>				
2100						
2200						
2300	<u>4°52'N</u>	<u>105°00'W</u>				
2400						

$$\begin{array}{r} 75 \overline{)17} \\ \underline{15} \\ 2 \end{array}$$

$$\begin{array}{r} 24 \\ \underline{24} \\ 0 \end{array}$$

Date 22 August 1969 Ship ( ) Cruise No.

Organization  Recorder

Sunrise: Time 0656 Position: Lat. 4°28'N, Long. 105°02'W

Sunset: Time 1910 Position: Lat. 3°20', Long. 105°14'N

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 68

Miles travelled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400	4°34'N	105°02'W				
0500						
0600	4°34'N	105°02'W				
0700	4°27'N	105°02'W				
0800	4°18'N	105°03'W				
0900	4°14'N	105°03'W				
1000	4°05'N	105°03'W				
1100	3°57'N	105°04'W				
1200	3°57'N	105°04'W				
1300	3°54'N	105°04'W				
1400	3°49'N	105°05'W				
1500	3°43'N	105°06'W				
1600	3°33'N	105°11'W				
1700	3°33'N	105°11'W				
1800	3°33'N	105°11'W				
1900	3°27'N	105°11'W				
2000	3°15'N	105°10'W				
2100						
2200						
2300	3°50'N	105°16'W				
2400						

✓ Date 23 August 1967 Ship \_\_\_\_\_ ( ) Cruise No. \_\_\_\_\_

Organization \_\_\_\_\_ Recorder \_\_\_\_\_

Sunrise: Time 0657 Position: Lat. 2°19'N, Long. 105°14'W

Sunset: Time 1909 Position: Lat. 1°20'N, Long. 105°15'W

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 59

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400	<u>2°28'N</u>	<u>105°15'W</u>				
0500						
0600	<u>2°28'N</u>	<u>105°15'W</u>				
0700	<u>2°19'N</u>	<u>105°14'W</u>				
0800	<u>2°10'N</u>	<u>105°13'W</u>				
0900	<u>2°03'N</u>	<u>105°13'W</u>				
1000	<u>1°54'N</u>	<u>105°12'W</u>				
1100	<u>1°47'N</u>	<u>105°12'W</u>				
1200	<u>1°47'N</u>	<u>105°12'W</u>				
1300	<u>1°47'N</u>	<u>105°12'W</u>				
1400	<u>1°47'N</u>	<u>105°12'W</u>				
1500	<u>1°39'N</u>	<u>105°12'W</u>				
1600	<u>1°29'N</u>	<u>105°12'W</u>				
1700	<u>1°21'N</u>	<u>105°11'W</u>				
1800	<u>1°20'N</u>	<u>105°11'W</u>				
1900	<u>1°15'N</u>	<u>105°15'W</u>				
2000	<u>1°09'N</u>	<u>105°18'W</u>				
2100						
2200						
2300	<u>0°53'N</u>	<u>105°19'W</u>				
2400						

Date 24 Aug 1967 Ship ( ) Cruise No.  

Organization   Recorder  

Sunrise: Time 0659 Position: Lat. 0°16'N, Long. 105°24'W

Sunset: Time 1906 Position: Lat. 0°56'S, Long. 105°15'W

Miles travelled from 0000 hours to sunrise =  

Miles travelled from sunrise to sunset = 72

Miles travelled from sunset to 2400 hours =  

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400	<u>0° 24'N</u>	<u>105° 25'W</u>				
0500						
0600	<u>0° 24'N</u>	<u>105° 23'W</u>				
0700	<u>0° 16'N</u>	<u>105° 24'W</u>				
0800	<u>0° 05'N</u>	<u>105° 23'W</u>				
0900	<u>0° 01'S</u>	<u>105° 21'W</u>				
1000	<u>0° 12'S</u>	<u>105° 20'W</u>				
1100	<u>0° 20'S</u>	<u>105° 20'W</u>				
1200	<u>0° 20'S</u>	<u>105° 20'W</u>				
1300	<u>0° 21'S</u>	<u>105° 20'W</u>				
1400	<u>0° 23'S</u>	<u>105° 19'W</u>				
1500	<u>0° 32'S</u>	<u>105° 19'W</u>				
1600	<u>0° 42'S</u>	<u>105° 18'W</u>				
1700	<u>0° 42'S</u>	<u>105° 15'W</u>				
1800	<u>0° 43'S</u>	<u>105° 15'W</u>				
1900	<u>0° 57'S</u>	<u>105° 15'W</u>				
2000	<u>1° 06'S</u>	<u>105° 15'W</u>				
2100						
2200						
2300	<u>1° 34'S</u>	<u>105° 08'W</u>				
2400						

Organization \_\_\_\_\_ Recorder \_\_\_\_\_

## Recorder

Sunrise: Time 0702 Position: Lat. 2°08'5", Long. 104°59'W

Sunset: Time 1903 Position: Lat.  $30^{\circ} 27' 5''$ , Long.  $104^{\circ} 57' 0''$

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 79

Miles travelled from sunset to 2400 hours =

TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.			
2.			
3.			
4.			
5.			

### Hourly Positions:

Time    Latitude    Longitude    Wind Dir.    Wind Sp.    Wave Dir.    Wave Hgt.

0100		
0200		
0300		
0400	20° 5	105° 01' W
0500	20° 5	105° 01' W
0600	20° 5	105° 01' W
0700	2° 08' S	105° 59' W
0800	2° 20' S	104° 55' W
0900	2° 28' S	104° 52' W
1000	2° 31' S	104° 50' W
1100	2° 49' S	104° 47' W
1200	2° 47' S	104° 44' W
1300	2° 54' S	104° 41' W
1400	3° 5' S	104° 38' W
1500	3° 07' S	104° 36' W
1600	3° 17' S	104° 35' W
1700	3° 11' S	104° 34' W
1800	3° 19' S	104° 33' W
1900	3° 27' S	104° 31' W
2000	3° 37' S	105° 02' W
2100		
2200		
2300	4° 05' S	105° 02' W
2400		

Date 26 Aug 1967 Ship ( ) Cruise No.

Organization  Recorder

Sunrise: Time 0709 Position: Lat. 4° 03' S, Long. 106° 31' W

Sunset: Time 1919 Position: Lat. 3° 35' S, Long. 108° 59' W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 117

Miles travelled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400						
0500						
0600						
0700	4° 03' S	106° 29' W				
0800	4° 01' S	106° 40' W				
0900	3° 59' S	106° 51' W				
1000	3° 57' S	107° 02' W				
1100	3° 55' S	107° 13'				
1200	3° 53' S	107° 24' W				
1300	3° 50.5' S	107° 37' W				
1400	3° 48' S	107° 50' W				
1500	3° 45.5' S	108° 03' W				
1600	3° 43' S	108° 16' W				
1700	3° 40.5' S	108° 29' W				
1800	3° 38' S	108° 42' W				
1900	3° 35.5' S	108° 55' W				
2000	3° 33' S	109° 08' W				
2100						
2200						
2300						
2400						

Meet R/V Washington at 3° 07' S 108° 53' W

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✓ Date 27 August 1967 Ship \_\_\_\_\_ ( ) Cruise No. \_\_\_\_\_

Organization \_\_\_\_\_ Recorder \_\_\_\_\_

Sunrise: Time 0716 Position: Lat. 3°20'S, Long. 109°17'W

Sunset: Time 1914 Position: Lat. 3°43'S, Long. 107°44'W

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 85

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
------	----------	-----------	-----------	----------	-----------	-----------

0100						
0200						
0300						
0400						
0500						
0600	<u>3°18'S</u>	<u>109°20'W</u>				
0700	<u>3°20'S</u>	<u>109°11'W</u>				
0800	<u>3°22'S</u>	<u>109°01.6'W</u>	<u>105°15'</u>			
0900	<u>3°24'S</u>	<u>108°52.2'W</u>				
1000	<u>3°26'S</u>	<u>108°42.8'W</u>				
1100	<u>3°28'S</u>	<u>108°33.4'W</u>				
1200	<u>3°31'S</u>	<u>108°24'W</u>				
1300	<u>3°33'S</u>	<u>108°14'W</u>				
1400	<u>3°35'S</u>	<u>108°04'W</u>				
1500	<u>3°37'S</u>	<u>107°54'W</u>				
1600	<u>3°39'S</u>	<u>107°45'W</u>				
1700	<u>3°41'S</u>	<u>107°35'W</u>				
1800	<u>3°43'S</u>	<u>107°26'W</u>				
1900	<u>3°45'S</u>	<u>107°17'W</u>				
2000	<u>3°47'S</u>	<u>107°08'W</u>				
2100						
2200						
2300						
2400						

Date 28 August 1967 Ship ( ) Cruise No. \_\_\_\_\_

Organization \_\_\_\_\_ Recorder \_\_\_\_\_

Sunrise: Time 6704 Position: Lat. 04° 10' S, Long. 105° 31' W

Sunset: Time 1901 Position: Lat. 5° 11' S, Long. 105° 02' W

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 70

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.	0640		4° 06' S	105° 34' S
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400						
0500						
0600	4° 07' S	105° 40' W				
0700	4° 10' S	105° 32' W				
0800	4° 14' S	105° 21' W				
0900	4° 18' S	105° 16' W				
1000	4° 22' S	105° 07' W				
1100	4° 26' S	105° 02' W				
1200						
1300	4° 32' S	105° 01' W				
1400	4° 38' S	105° 01' W				
1500	4° 50' S	105° 01' W				
1600	5° 01' S	105° 09' W				
1700	5° 01' S	105° 09' W				
1800	5° 01' S	105° 07' W				
1900	5° 11' S	105° 02' W				
2000						
2100						
2200						
2300						
2400						

Date 29 Aug 1967 Ship \_\_\_\_\_ (\_\_\_\_\_) Cruise No. \_\_\_\_\_

Organization \_\_\_\_\_ Recorder \_\_\_\_\_

Sunrise: Time 0600 Position: Lat. 40°40'5", Long. 104°49'W

Sunset: Time 1851 Position: Lat. 30°42'5", Long. 103°10'W

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 828

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400	40°40'5"	104°00'W				
0500	40°37'5"	104°05'W				
0600	40°34'5"	104°04'W				
0700	40°31'5"	104°02'W				
0800	40°28'5"	104°00'W				
0900	40°25'5"	104°05'W				
1000	40°22'5"	104°20'W				
1100	40°19'5"	104°13'W				
1200	40°16'5"	104°05'W				
1300	40°11'5"	103°57'W				
1400	40°07'5"	103°49'W				
1500	40°03'5"	103°41'W				
1600	30°57'5"	103°33'W				
1700	30°52'5"	103°25'W				
1800	30°47'5"	103°17'W				
1900	30°42'5"	103°09'W				
2000						
2100						
2200						
2300						
2400						

Date 30 August 1967 Ship (      ) Cruise No.       

Organization        Recorder       

Sunrise: Time        Position: Lat.       , Long.       

Sunset: Time        Position: Lat.       , Long.       

Miles travelled from 0000 hours to sunrise =       

Miles travelled from sunrise to sunset = 92.8

Miles travelled from sunset to 2400 hours =       

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.			36	
4.			92.8	
5.				3 94/27 6 27 30

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400						
0500						
0600	30 05'S	101° 47'W				
0700	20 59'S	101° 39'W	10KTS			
0800	20 53'S	101° 37'W				
0900	20 47'S	101° 28'W				
1000	20 41'S	101° 11'W				
1100	20 35'S	101° 02'W				
1200	20 29'S	100° 53'W				
1300	20 23'S	100° 44'W				
1400	20 17'S	100° 35'W				
1500	20 11'S	100° 26'W				
1600	20 05'S	100° 17'W				
1700	10 59'S	100° 08'W				
1800	10 53'S	100° 09'W				
1900	10 47'S	100° 50'W				
2000		41				
2100		32				
2200		23				
2300		13				
2400		03				

Date 31 August 1967 Ship ( ) Cruise No.  

Organization   Recorder  

Sunrise: Time 0700 Position: Lat. 0° 51' S, Long. 98° 03' W

Sunset: Time 1836 Position: Lat. 0° 11' N, Long. 98° 03' W

Miles travelled from 0000 hours to sunrise =  

Miles travelled from sunrise to sunset = 62

Miles travelled from sunset to 2400 hours =  

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200	<u>100° 15'</u>	<u>98° 03' W</u>				
0300						
0400						
0500						
0600						
0700	<u>0° 51' S</u>	<u>98° 03' W</u>				
0800	<u>0° 46' S</u>	<u>98° 04' W</u>				
0900	<u>003° 2' S</u>	<u>98° 03' W</u>				
1000	<u>00 19' S</u>	<u>98° 03' W</u>				
1100	<u>00 11' S</u>	<u>98° 03' W</u>				
1200	<u>00 11' S</u>	<u>98° 03' W</u>				
1300						
1400	<u>00 08' S</u>	<u>98° 03' W</u>				
1500	<u>01 50'</u>	<u>98° 03' W</u>				
1600	<u>0° 10' N</u>	<u>98° 03' W</u>				
1700	<u>0° 12' N</u>	<u>98° 03' W</u>				
1800	<u>00 15' N</u>	<u>98° 03' W</u>				
1900	<u>00 15' N</u>	<u>98° 03' W</u>				
2000						
2100						
2200	<u>00 47' N</u>	<u>98° 03' W</u>				
2300						
2400						

Date 12 Aug 1967 Ship \_\_\_\_\_ ( ) Cruise No. \_\_\_\_\_

Organization \_\_\_\_\_ Recorder \_\_\_\_\_

Sunrise: Time 0630 Position: Lat. 1° 12'N, Long. 98° 04'W

Sunset: Time \_\_\_\_\_ Position: Lat. 20° 29'N, Long. 98° 07'W

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 72

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400	<u>10 12'N</u>	<u>98 08'W</u>				
0500	<u>10 12'N</u>	<u>98 05'W</u>				
0600	<u>10 13'N</u>	<u>98 04'W</u>				
0700	<u>10 13'N</u>	<u>98 04'W</u>				
0800	<u>10 31'N</u>	<u>98 04'W</u>				
0900	<u>10 39'N</u>	<u>98 04'W</u>				
1000	<u>10 47'N</u>	<u>98 04'W</u>				
1100	<u>10 55'N</u>	<u>98 05'W</u>				
1200	<u>10 55'N</u>	<u>98 05'W</u>				
1300						
1400	<u>20 04'N</u>	<u>98 06'W</u>				
1500	<u>20 11'N</u>	<u>98 06'W</u>				
1600	<u>20 21'N</u>	<u>98 07'W</u>				
1700	<u>20 31'N</u>	<u>98 07'W</u>				
1800	<u>20 32'N</u>	<u>98 07'W</u>				
1900	<u>20 33'N</u>	<u>98 07'W</u>				
2000						
2100						
2200						
2300	<u>30 08'N</u>	<u>98 07'N</u>				
2400						

Date 1 Sept 1967 Ship ( ) Cruise No. \_\_\_\_\_

Organization \_\_\_\_\_ Recorder \_\_\_\_\_

Sunrise: Time 0627 Position: Lat. 3°40'N, Long. 98°12'W

Sunset: Time 1838 Position: Lat. 4°54'N, Long. 98°03'W

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 74

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200						
0300						
0400	3°33'N	98°15'W				
0500	3°33'N	98°15'W				
0600	3°33'N	98°15'W				
0700	3°45'N	98°11'W				
0800	3°45'N	98°08'W				
0900	4°02'N	98°05'W				
1000	4°12'N	98°02'W				
1100	4°16'N	98°W				
1200	4°21'N	98°W				
1300	4°22'N	98°W				
1400	4°28'N	98°05'W				
1500	4°36'N	98°02'W				
1600	4°48'N	98°04'W				
1700	4°48'N	98°04'W				
1800	4°48'N	98°04'W				
1900	4°58'N	98°03'W				
2000						
2100						
2200						
2300	5°36'N	97°54'W				
2400						

Date 38 Sept 1967

Ship \_\_\_\_\_ ( )

Cruise No. \_\_\_\_\_

Organization \_\_\_\_\_

Recorder \_\_\_\_\_

Sunrise: Time 0625Position: Lat. 6° 11' N, Long. 97° 15' WSunset: Time 1839Position: Lat. 7° 43' N, Long. 98° WMiles travelled from 0000 hours to sunrise = 6811'Miles travelled from sunrise to sunset = 93

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

## Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
------	----------	-----------	-----------	----------	-----------	-----------

0100						
0200						
0300						
0400	<u>6° 09' N</u>	<u>97° 45' W</u>				
0500						
0600	<u>6° 09' N</u>	<u>97° 45' W</u>				
0700	<u>6° 11' N</u>	<u>97° 45' W</u>				
0800	<u>6° 35' N</u>	<u>97° 45' W</u>				
0900						
1000						
1100	<u>6° 56' N</u>	<u>97° 48' W</u>				
1200	<u>6° 56' N</u>	<u>97° 48' W</u>				
1300	<u>7° 01' N</u>	<u>97° 48' W</u>				
1400	<u>7° 12' N</u>	<u>97° 53' W</u>				
1500	<u>7° 24' N</u>	<u>97° 56' W</u>				
1600	<u>7° 25' N</u>	<u>98° W</u>				
1700						
1800						
1900						
2000						
2100						
2200						
2300	<u>8° 03' N</u>	<u>97° 56' W</u>				
2400						

Date 4 Sept 1969 Ship \_\_\_\_\_ ( ) Cruise No. \_\_\_\_\_

Organization \_\_\_\_\_ Recorder \_\_\_\_\_

Sunrise: Time 0623 Position: Lat. 90°04'N, Long. 97°51'W

Sunset: Time 1839 Position: Lat. 10°33'N, Long. 98°01'W

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 89

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400	<u>89°58'N</u>	<u>97°51'W</u>				
0500	<u>89°58'N</u>	<u>97°51'W</u>				
0600	<u>9°00'N</u>	<u>97°51'W</u>				
0700	<u>9°12'N</u>	<u>97°50'W</u>				
0800	<u>9°34'N</u>	<u>97°49'W</u>				
0900	<u>9°32'N</u>	<u>97°49'W</u>				
1000	<u>9°38'N</u>	<u>97°48'W</u>				
1100	<u>9°41'N</u>	<u>97°47'W</u>				
1200	<u>9°45'N</u>	<u>97°48'W</u>				
1300	<u>9°51'N</u>	<u>97°51'W</u>				
1400	<u>10°01'N</u>	<u>97°55'W</u>				
1500	<u>10°13'N</u>	<u>97°58'W</u>				
1600	<u>10°25'N</u>	<u>98°01'W</u>				
1700	<u>10°25'N</u>	<u>98°01'W</u>				
1800	<u>10°25'N</u>	<u>98°01'W</u>				
1900	<u>10°36'N</u>	<u>98°01'W</u>				
2000						
2100						
2200						
2300	<u>11°03'N</u>	<u>98°03'W</u>				
2400						

Date 5 Sept 1969 Ship \_\_\_\_\_ ( ) Cruise No. \_\_\_\_\_

Organization \_\_\_\_\_ Recorder \_\_\_\_\_

Sunrise: Time 0622 Position: Lat. 11°33'N, Long. 98°05'W

Sunset: Time 1843 Position: Lat. 13°16'N, Long. 98°03'W

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 103

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400	<u>11°28'N</u>	<u>98°07'W</u>				
0500	<u>11°28'N</u>	<u>98°07'W</u>				
0600	<u>11°29'N</u>	<u>98°07'W</u>				
0700	<u>11°41'N</u>	<u>98°05'W</u>				
0800	<u>11°52'N</u>	<u>98°03'W</u>				
0900	<u>12°01'N</u>	<u>98°02'W</u>				
1000	<u>12°11'N</u>	<u>98°01'W</u>				
1100	<u>12°11'N</u>	<u>97°59'W</u>				
1200	<u>12°18'N</u>	<u>97°59'W</u>				
1300	<u>12°19'N</u>	<u>98°W</u>				
1400	<u>12°30'N</u>	<u>98°02'W</u>				
1500	<u>12°42'N</u>	<u>98°02'W</u>				
1600	<u>12°53'N</u>	<u>98°01'W</u>				
1700	<u>12°53'N</u>	<u>98°03'W</u>				
1800	<u>12°55'N</u>	<u>98°03'W</u>				
1900	<u>13°08'N</u>	<u>98°03'W</u>				
2000	<u>13°20'N</u>	<u>98°04'W</u>				
2100						
2200						
2300	<u>13°41'N</u>	<u>98°03'W</u>				
2400						

Date 6 Sept 1967 Ship \_\_\_\_\_ (\_\_\_\_\_) Cruise No. \_\_\_\_\_

Organization \_\_\_\_\_ Recorder \_\_\_\_\_

Sunrise: Time 0622 Position: Lat. 14° 14' N, Long. 98° 01' W

Sunset: Time 1842 Position: Lat. 15° 38' N, Long. 97° 53' W

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 91

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400	14° 09' N	98° 01' W				
0500	14° 09' N	98° 01' W				
0600	14° 10' N	98° 01' W				
0700	14° 23' N	98° 01' W				
0800	14° 34' N	98° W				
0900	14° 42' N	98° W				
1000	14° 50' N	98° W				
1100	14° 56' N	97° 59' N				
1200	14° 56' N	97° 59' N				
1300	15° 03' N	97° 59' N				
1400	15° 15' N	97° 59' N				
1500	15° 27' N	98° W				
1600	15° 28' N	98° 01' W				
1700	15° 38' N	98° 01' W				
1800	15° 38.8' N	98° 01' W				
1900	15° 38' N	97° 49' N				
2000						
2100						
2200						
2300						
2400						

Date 7 September 1967 Ship ( ) Cruise No. \_\_\_\_\_

Organization \_\_\_\_\_ Recorder \_\_\_\_\_

Sunrise: Time \_\_\_\_\_ Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Sunset: Time \_\_\_\_\_ Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = \_\_\_\_\_

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400						
0500						
0600	18° N	96° 07' W				
0700	16° 02' N	95° 56' W				
0800	16° 04' N	95° 45' W				
0900	16° 06' N	95° 34' W				
1000	16° 08' N	95° 23' W				
1100	16° 10' N	95° 12' W				
1200	↓	95° 12' W				
1300						
1400						
1500						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						

Date 14 Sept 1967

Ship \_\_\_\_\_ ( )

Cruise No. \_\_\_\_\_

Organization \_\_\_\_\_

Recorder \_\_\_\_\_

Sunrise: Time \_\_\_\_\_

Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Sunset: Time 1816

Position: Lat. \_\_\_\_\_, Long. \_\_\_\_\_

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 50

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400						
0500						
0600	Salina Cruz					
0700						
0800	16° 01' N	95° 12' W				
0900	16° 02.5' N	95° 04' W				
1000	15° 55' N	94° 55' W				
1100	15° 47.5' N	94° 46' W				
1200	15° 40' N	94° 37' W				
1300	15° 33.6' N	94° 28.6' W				
1400	15° 27' N	94° 20' W				
1500	15° 20.4' N	94° 11.4' W				
1600	15° 13.8' N	94° 03.7' W				
1700	15° 7.2' N	93° 54.2' W				
1800	15° 00.6' N	93° 45.6' W				
1900	14° 54' N	93° 37' W				
2000						
2100						
2200						
2300						
2400						

Date 15 Sept 1967 Ship        ( ) Cruise No.       

Organization        Recorder       

Sunrise: Time        Position: Lat.       , Long.       

Sunset: Time        Position: Lat. 12° 32' N, Long. 92° 03' W

Miles travelled from 0000 hours to sunrise =       

Miles travelled from sunrise to sunset = 74

Miles travelled from sunset to 2400 hours =       

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400						
0500						
0600	<u>13° 45' N</u>	<u>92° 07' W</u>				
0700	<u>13° 38' N</u>	<u>91° 58' W</u>				
0800	<u>13° 36' N</u>	<u>91° 53' W</u>				
0900	<u>13° 31' N</u>	<u>91° 55' W</u>				
1000	<u>13° 19' N</u>	<u>91° 53' W</u>				
1100	<u>13° 13' N</u>	<u>91° 51' W</u>				
1200	<u>13° 13' N</u>	<u>91° 51' W</u>				
1300	<u>13° 04' N</u>	<u>91° 54' W</u>				
1400	<u>12° 54' N</u>	<u>91° 57' W</u>				
1500	<u>12° 45' N</u>	<u>92° 00' W</u>				
1600	<u>12° 40' N</u>	<u>92° 03' W</u>				
1700	<u>12° 40' N</u>	<u>92° 03' W</u>				
1800	<u>12° 34' N</u>	<u>92° 03' W</u>				
1900	<u>12° 24' N</u>	<u>92° 07' W</u>				
2000						
2100						
2200						
2300						
2400						

Date 16 Sept 1967 Ship \_\_\_\_\_ ( ) Cruise No. \_\_\_\_\_

Organization \_\_\_\_\_ Recorder \_\_\_\_\_

Sunrise: Time 0558 Position: Lat. 11° 08'N, Long. 91° 58'W

Sunset: Time 1808 Position: Lat. 90° 39'N, Long. 91° 58'W

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 89

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400	<u>11° 08'N</u>	<u>91° 58'W</u>				
0500	↓	↓				
0600	<u>11° 08'N</u>	<u>91° 58'W</u>				
0700	<u>10° 58'N</u>	<u>91° 57'W</u>				
0800	<u>10° 48'N</u>	<u>91° 56'W</u>				
0900	<u>10° 37'N</u>	<u>91° 55'W</u>				
1000	<u>10° 26'N</u>	<u>91° 54'W</u>				
1100	<u>10° 19'N</u>	<u>91° 54'W</u>				
1200	<u>10° 19'N</u>	<u>91° 54'W</u>				
1300	<u>10° 11'N</u>	<u>91° 55'W</u>				
1400	<u>10° 02'N</u>	<u>91° 56'W</u>				
1500	<u>09° 52'N</u>	<u>91° 57'W</u>				
1600	<u>09° 42'N</u>	<u>91° 58'W</u>				
1700	<u>09° 42'N</u>	<u>91° 58'W</u>				
1800	<u>09° 41'N</u>	<u>91° 58'W</u>				
1900	<u>09° 31'N</u>	<u>91° 58'W</u>				
2000						
2100						
2200						
2300						
2400						

8  
41  
49

Date 17 Sept 1967

Ship \_\_\_\_\_ ( )

Cruise No. \_\_\_\_\_

Organization \_\_\_\_\_

Recorder \_\_\_\_\_

Sunrise: Time 0558Position: Lat. 8°28'N, Long. 92°05'WSunset: Time 1807Position: Lat. 6°57'N, Long. 92°08'W

Miles travelled from 0000 hours to sunrise = \_\_\_\_\_

Miles travelled from sunrise to sunset = 91

Miles travelled from sunset to 2400 hours = \_\_\_\_\_

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400	<u>8°28'N</u>	<u>92°05'W</u>				
0500	<u>1</u>	<u>1</u>				
0600	<u>8°28'N</u>	<u>92°05'W</u>				
0700	<u>8°18'N</u>	<u>92°05'W</u>				
0800	<u>8°08'N</u>	<u>92°06'W</u>				
0900	<u>7°58'N</u>	<u>92°06'W</u>				
1000	<u>7°48'N</u>	<u>92°07'W</u>				
1100	<u>7°44'N</u>	<u>92°08'W</u>				
1200	<u>7°44'N</u>	<u>92°08'W</u>				
1300	<u>7°33'N</u>	<u>92°08'W</u>				
1400	<u>7°23'N</u>	<u>92°08'W</u>				
1500	<u>7°12'N</u>	<u>92°08'W</u>				
1600	<u>07°01'N</u>	<u>92°08'W</u>				
1700	<u>7°01'N</u>	<u>92°08'W</u>				
1800	<u>6°59'N</u>	<u>92°08'W</u>				
1900	<u>6°49'N</u>	<u>92°08'W</u>				
2000						
2100						
2200						
2300						
2400						

Date 18 Sept 1967

Ship \_\_\_\_\_ ( ) Cruise No. \_\_\_\_\_

Organization \_\_\_\_\_

Recorder \_\_\_\_\_

Sunrise: Time 0558Position: Lat. 5°40'N, Long. 91°58'WSunset: Time 1806Position: Lat. 4015'N, Long. 91°56'W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset =

Miles travelled from sunset to 2400 hours =

(80) change 75 45

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.				
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400	<u>05°40'N</u>	<u>91°58'W</u>				
0500	↓	↓				
0600	↓	↓				
0700	<u>5°29'N</u>	<u>91°57'W</u>				
0800	<u>5°18'N</u>	<u>91°55'W</u>				
0900	<u>5°08'N</u>	<u>91°53'W</u>				
1000	<u>4°58'N</u>	<u>91°53'W</u>				
1100	<u>4°54'N</u>	<u>91°52'W</u>				
1200	<u>4°54'N</u>	<u>91°52'W</u>				
1300	<u>4°47'N</u>	<u>91°51'W</u>				
1400	<u>4°37'N</u>	<u>91°51'W</u>				
1500	<u>4°30'N</u>	<u>91°55'W</u>				
1600	<u>4°19'N</u>	<u>91°56'W</u>				
1700	<u>4°19'N</u>	<u>91°56'W</u>				
1800	<u>4°16'N</u>	<u>91°56'W</u>				
1900	<u>4°16'N</u>	<u>91°56'W</u>				
2000						
2100						
2200						
2300						
2400						

SR 0559 2059'N 92°W

SS 1°39' 92°04'W

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DIVISION OF BIRDS  
AT SEA CLIMATOLOGICAL DATADATE 19 Sep 1969  
Mile - 80

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100															
0200															
0300															
0400	20°59'N	92°00'W													
0500															
0600	20°59'N	92°W													
0700	20°48'N	92°02'W													
0800	20°37'N	92°04'W													
0900	20°36'N	92°05'W													
1000	20°35'N	92°06'W													
1100	20°34'N	92°07'W													
1200	20°33'N	92°07'W													
1300	20°32'N	92°08'W													
1400	20°31'N	92°08'W													
1500	20°30'N	92°07'W													
1600	20°29'N	92°06'W													
1700															
1800															
1900															
2000															
2100															
2200															
2300															
2400															

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

4-31

4-15

8-46

13

21

34

38  
39  
40  
41

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SR 0559 0°23'N 92°04'W

SS 1805 0°50'S 92°04'W SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS

AT SEA CLIMATOLOGICAL DATA

DATE 20 Sept 1967

Miler-73

10-1  
2  
50  
11.20

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100															
0200															
0300															
0400	0°23'N	92°04'W													
0500	0°23'N	92°04'W													
0600	0°23'N	92°04'W													
0700	0°16'N	92°04'W													
0800	0°09'N	92°04'W													
0900	0°01'N	92°04'W													
1000	0°09'S	92°04'W													
1100	0°14'S	92°04'W													
1200	0°14'S	92°04'W													
1300	0°20'S	92°04'W													
1400	0°23'S	92°04'W													
1500	0°27'S	92°04'W													
1600	0°34'S	92°04'W													
1700	0°41'S	92°04'W													
1800	0°44'S	92°04'W													
1900	0°51'S	92°04'W													
2000															
2100															
2200															
2300															
2400															

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SR 0559 2004'S 92°07'W  
SS 1809 3031'S 92°09'W SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA CLIMATOLOGICAL DATA

DATE 21 Sept 1967

Miler-87

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100															
0200															
0300															
0400	20° 44'S	92°07'W													
0500	↓	↓													
0600															
0700	20° 15'S	92°09'W													
0800	20° 16'S	92°09'W													
0900	20° 37'S	92°09'W													
1000	20° 41'S	92°09'W													
1100	20° 58'S	92°10'W													
1200	20° 50'S	92°10'W													
1300	20° 49'S	92°10'W													
1400	20° 49'S	92°10'W													
1500	20° 47'S	92°09'W													
1600	20° 47'S	92°08'W													
1700	20° 47'S	92°08'W													
1800	20° 46'S	92°05'W													
1900	20° 46'S	92°06'W													
2000															
2100															
2200															
2300															
2400															

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

g-31  
34  
65

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4047'N  
SR - 0630 92006'W  
SS - 1630 5057'N 38'W SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
Miler - 80  
AT SEA CLIMATOLOGICAL DATA

40

DATE 22 Sept 1967

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100															
0200															
0300															
0400	40 47 15	92 00 61 W													
0500															
0600															
0700	40 47 15	92 00 61 W													
0800	38 05 15	91 58 06 W													
0900	37 40 15	91 50 06 W													
1000	37 27 15	91 50 06 W													
1100	37 27 15	91 50 05 W													
1200	37 27 15	91 50 05 W													
1300	37 24 15	91 50 02 W													
1400	37 16 15	91 50 05 W													
1500	37 08 15	91 50 08 W													
1600	37 0 15	91 50 01 W													
1700	36 53 15	91 50 24 W													
1800	36 45 15	91 50 27 W													
1900															
2000	40 30 15	91 50 24 W													
2100															
2200															
2300															
2400															

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA CLIMATOLOGICAL DATA

DATE

23 Sept 1967

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100															
0200															
0300															
0400	30°28' S	90°17' W													
0500	21°55'	91°10' W													
0600	35°41' S	90°03' W													
0700	30°58' S	89°31' W													
0800	30°58' S	89°48' W													
0900	29°55' S	89°44' W													
1000	30°02' S	89°32' W													
1100	29°28' S	89°26' W													
1200	29°17' S	89°17' W													
1300	29°08' S	89°16' W													
1400	29°02' S	89°02' W													
1500	28°58' S	88°58' W													
1600	28°53' S	88°53' W													
1700	28°47' S	88°47' W													
1800	28°38' S	88°38' W													
1900															
2000															
2100															
2200															
2300															
2400															

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA CLIMATOLOGICAL DATA

DATE 21 Sept 1967

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100															
0200															
0300															
0400															
0500															
0600															
0700															
0800															
0900															
1000															
1100															
1200															
1300															
1400															
1500															
1600															
1700															
1800															
1900															
2000															
2100															
2200															
2300															
2400															

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

30  
40  
10

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SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA CLIMATOLOGICAL DATA

DATE 25 Sept. 1967

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100															
0200															
0300															
0400	10° 45' N	84° 30' W													
0500	10° 45' N	84° 30' W													
0600	10° 47' N	84° 35' W													
0700	10° 47' N	84° 35' W													
0800	10° 48' N	84° 35' W													
0900	10° 48' N	84° 35' W													
1000	10° 48' N	84° 35' W													
1100	10° 48' N	84° 35' W													
1200	10° 48' N	84° 35' W													
1300	10° 50' N	84° 35' W													
1400	10° 51' N	84° 35' W													
1500	10° 53' N	84° 35' W													
1600	10° 55' N	84° 35' W													
1700	10° 56' N	84° 35' W													
1800	10° 57' N	84° 35' W													
1900	10° 58' N	84° 35' W													
2000															
2100															
2200															
2300															
2400															

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

36  
64  
60 49  
49  
48

76

32  
10  
30  
73

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SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA CLIMATOLOGICAL DATA

DATE 26 Sept 1969

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100															
0200															
0300															
0400															
0500															
0600	50° 0' N	80° 09' W													
0700	50° 0' N	80° 01' W													
0800	50° 53' N	80° 53' W													
0900	51° 34' N	80° 43' W													
1000	50° 55' N	80° 35' W													
1100	51° 15' N	80° 26' W													
1200	51° 12' N	80° 22' W													
1300	50° 27' N	80° 18' W													
1400	50° 56' N	80° 03' W													
1500	51° 13' N	80° 13' W													
1600	50° 51' N	80° 07' W													
1700	51° 23' N	80° 10' W													
1800	50° 12' N	80° 04' W													
1900															
2000															
2100															
2200															
2300															
2400															

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

4 9 36  
81 85 14  
31 34  
18 1400

896-46

5

6

7

90-0

180 180

90 90

2

0

1

3